India
Study on Basic Information Collection on promoting Foreign Direct Investment to PPP Infrastructure in India

Final Report

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Chapter 1 Current status of PPP Infrasturcture in India

1.1 Overview of PPP Infrastructure in India

Investment through the PPP route has been on an uptrend since 2000, with the momentum being more pronounced in post 2005 era which saw a significant push from the government's side by way of policy support and financing schemes and creating institutions for supporting PPP's. Government of India is seized on these challenges and this has led the Finance Minster to announce a comprehensive PPP policy as part of his 2011-12 budget speech (Source: http://www.indiabudget.gov.in/bspeecha.asp).

1.2 Implementation status of PPP Infrasturcture in India

1.2.1. Implementation status of PPP Inrastructure by sectors

There has been reasonable action in the infrastructure PPP space owing to continuous thrust from the government's side. The support has been through higher budgetary allocations, financing schemes like VGF, initiatives like IIFCL (also supporting through refinancing and take out financing schemes), IIPDF and infrastructure debt funds. Moreover, the centre has taken steps towards laying down a strong policy framework for PPP in the country. A need has been felt to further strengthen the framework as evident from the pronouncement of a comprehensive PPP policy as indicated in Budget 2011-12. An overview of total PPP projects sector wise in terms of number and value is provided below.

Table 1-1 Sector Wise Number of PPP Projects and Value of Contracts as on 31st July 2011

SECTOR	Number of Projects	% of Total	Total Project Cost	%of Total
Airports	5	1%	19111	5%
Education	17	2%	1850	0%
Energy	56	7%	67248	18%
Health Care	8	1%	1833	0%
Ports	61	8%	81038	21%
Railways	4	1%	1601	0%
Roads	405	53%	176724	46%
Tourism	50	7%	4487	1%
Urban Development	152	20%	29475	8%
Total	**758**	**100%**	**383332**	**100%**

(Source: pppindiadatabase.com)

We see that road projects account for 55% of the total number of projects and 47% by total value because of the small average size of projects. Ports though account for 8% of the total number of projects have a larger average size of project and contribute 20% in terms of total value.

It is noteworthy that if ports and central road projects are excluded from the total, there is in fact a relatively small value of deal flow, at only Rs 125187 Crores (33% as a percentage of total value) in basic infrastructure PPPs to-date, suggesting a significant potential upside for PPP projects across sectors where states and municipalities have primary responsibility. Recently emerging sectors are Power and Urban transport.

The potential use of PPPs in e-governance and health and education sectors remains largely untapped across India as a whole, though off-late there have been some activities shaping in these sectors.

As on April 2011, 205 projects with a total project cost of Rs. 209,148.7 crore had been approved by PPPAC with majority of them being in the roads and highways sector. Of the total projects, 16 were granted approval in the period

from Jan-11 to Apr-11. All projects which require VGF or are Centre sector projects (i.e project subject governed by Union List of constitution) are granted approval by PPPAC[1].

- Status of Investments in SEZs:

As on date, 584 SEZ's have been granted formal approval, 154 have been granted in-principle approval and another 377 have been notified. Majority of the investment in SEZ's has happened in the IT/ITeS sector.

Table 1-2 SEZs status description

SEZ status	Description
In – Principle Approval	Central Government grants the In – Principle Approval in the cases where land has not been secured but all other criteria's as defined in SEZ rules are fulfilled. The letter of approval of a Developer granted shall be valid for a period of one year within which time, the Developer shall submit suitable proposal for formal approval
Formally Approval	Central Government grants the formal approval in the cases where land is in possession of the developer
Notified	Central Government on acceptance of the conditions specified in the Letter of Approval and other details of submission by developer notify the identified area as a Special Economic Zone . Once the SEZ is notified, developer will seek approval for authorised operations in SEZ.

(Source http://www.sezindia.nic.in/goi-policies-sra.asp)

[1] On the other hand, the projects approved by PPPAC are limited as (a) central projects or (b) State/ULBs projects with VGF or other supporting schemes of central government. Hence, a lot of regional State/ULBs projects have not been count in pppindiadatabase.com as a matter of fact.

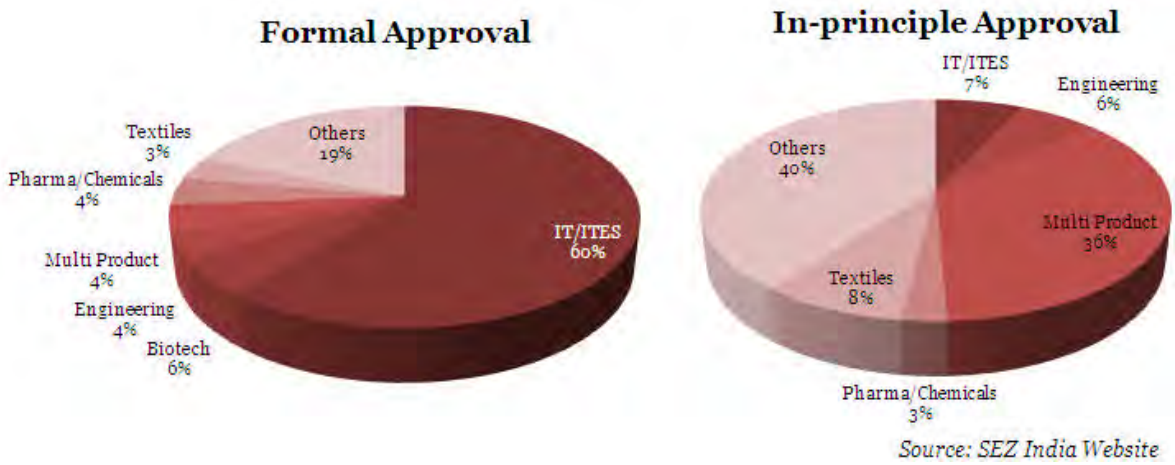

Figure 1-1 Sector - wise break up for SEZ's at different stages of approval
(Source: SEZ India Website)

While SEZ's have traditionally been very lucrative to the private sector as a developer owing to the tax and excise holidays besides other benefits, the attractiveness has come down after the recent budget announcement of bringing them under the Minimum Alternative Tax (MAT) net of 18.5%.

1.2.2. Implementation status of PPP Inrastructure by states

Karnataka, Andhra Pradesh, and Madhya Pradesh have maximum number of PPP projects, 104, 99 and 88 respectively, across different stages of implementation. As on as on 31st May 2011. However, some considerations are needed for completeness of the information because pppindiadatabase includes central projects which have been done in each state.

Table 1-3 State Wise Number of PPP Projects and Value of Contracts as on 31st July 2011

State	Total Number of Projects	% of Total	Value of Contracts (in Rs. Crore)	% of Total
Andhra Pradesh	96	13%	66918	17%
Arunachal Pradesh	0	0%	0	0%
Assam	4	1%	391	0%
Bihar	6	1%	2095	1%
Chandigarh	2	0%	75	0%
Chattisgarh	4	1%	838	0%
Delhi	13	2%	11316	3%
Goa	2	0%	250	0%
Gujarat	63	8%	39637	10%
Haryana	10	1%	11316	3%
Jammu and Kashmir	3	0%	6320	2%
Jharkhand	9	1%	1704	0%
Karnataka	104	14%	44664	12%
Kerala	32	4%	22282	6%
Madhya Pradesh	86	11%	14983	4%
Maharashtra	78	10%	45592	12%
Meghalaya	2	0%	762	0%
Orissa	27	4%	13348	4%
Puducherry	2	0%	3367	1%
Punjab	29	4%	3563	1%
Rajasthan	59	8%	15027	4%
Sikkim	24	3%	17111	5%
Tamil Nadu	43	6%	18626	5%
Uttar Pradesh	14	2%	26595	7%
Uttarakhand	2	0%	521	0%
West Bengal	30	4%	6617	2%
(inter-state)	14	2%	9567	2%
Total	**758**	**100%**	**383332**	**100%**

(Source: PPP India Database)

1.2.3. Type of PPP in PPP Infrastructure projects

There are a range of service delivery models that allocate responsibilities and risks between the public and private partners in different ways, which need be considered while structuring the project. The below table describes key parameters which would be used to differentiate between various PPP service delivery models:

Table 1-4 Key parameters used for PPP service delivery models

Parameter	Description
Asset Ownership	This refers to the party which owns the project or service assets. Duration of ownership can be limited by period of the agreement or can extend indefinitely.
Designing Responsibility	This refers to the party which bears the designing responsibility and thus the associated risk and cost.
Construction Responsibility	This refers to the party which bears the construction responsibility and thus the associated risk and cost.
Financing Responsibility	This refers to the party which bears the financing of construction and operation phase of the project and thus the associated risk and cost.
Operations & Maintenance Responsibility	This refers to the party which bears the Operations and Maintenance responsibility and thus the associated risk. This responsibility might be limited by period of the agreement or might extend indefinitely. This aspect is captured in "Limited by Period" parameter.
Retention of User Charges / Commercial Risk	This refers to the right of a party to collect and retain user charges as revenues.
Limited by Period	This refers to the period of agreement. The agreement or the contractual relationship can be limited by certain period or can extend indefinitely.

(Source: pppinindia.com Toolkit)

Based on the above described parameters, the following range of service delivery models can be evolved:

Table 1-5 Range of service delivery models

Type of Service Delivery Models	Service Contract	Management Contract	Lease	BOT (Build-Operate-Transfer) & Variants	Divestiture
Asset Ownership	Public	Public	Public	Public	Private
Designing Responsibility	Public	Public	Public (Private in few Variants)	Public (Private in few Variants)	Private
Construction Responsibility	Public	Public	Private	Private	Private (Brownfield)
Operations & Maintenance Responsibility	Private (Partial)	Private	Private	Private	Private
Financing Responsibility	Public	Public	Private	Private	Private
Retention of User Charges / Commercial Risk	Public	Public	Private	Private (Public In few Variants)	Private
Limited by Period	Yes	Yes	Yes	Yes / No	No

(Source: pppinindia.com Toolkit)

The most suitable service delivery model for project implementation would be determined by mapping these parameters against the project objectives and the key project features as required by Concessioning authority.

As far as current status of projects in place, there have been at least 740 PPP projects in main sectors of focus where a contract has been awarded and projects are underway in the sense that they are either operational, have reached construction stage, or at least construction/ implementation is imminent. The total project cost is estimated to be about Rs. 376,947 Crore.

Table 1-6 reflects Number of PPP projects under each sector under various PPP modes till May 2011.

Table 1-6 Number of projects by PPP modes in each sector

SECTOR	Management Contract	Lease	BOT (Annuity)	BOOT	DBFOT	BOO	LDOT	BOOST	BOT (Toll)	BOT	Others	Total	% of Total
Airports	0	0	0	2	0	1	2	0	0	0	0	5	1%
Education	0	1	0	5	0	0	0	0	0	8	3	17	2%
Energy	0	0	0	21	0	6	0	0	0	10	19	56	8%
Health Care	0	0	0	1	2	0	0	0	0	1	4	8	1%
Ports	0	2	3	9	1	1	0	11	15	6	8	56	8%
Railways	0	0	0	0	1	0	0	0	3	0	0	4	1%
Roads	0	0	54	1	3	0	0	0	272	68	10	408	55%
Tourism	3	14	2	2	9	1	0	0	0	13	6	50	7%
Urban Development	2	4	20	24	22	4	0	0	12	18	30	136	18%
Total	**5**	**21**	**79**	**65**	**38**	**13**	**2**	**11**	**302**	**124**	**80**	**740**	**100%**

(Source: pppndiadatabase.com)

Table 1-7 below reflects Projects cost under each sector under various PPP modes of execution till May 2011. The road sector has dominated investment by domestic players with aggregate investment of Rs176,908 crores

Table 1-7 Cumulative project costs by PPP modes in each sector

SECTOR	Management Contract	Lease	BOT (Annuity)	BOOT	DBFOT	BOO	LDOT	BOOST	BOT (Toll)	BOT	Others	Total	%of Total
Airports	0	0	0	4408	0	303	14400	0	0	0	0	19111	5%
Education	0	40	0	738	0	0	0	0	0	889	183	1850	0%
Energy	0	0	0	11368	0	18055	0	0	0	6400	31425	67248	18%
Health Care	0	0	0	275	217	0	0	0	0	67	1274	1833	0%
Ports	0	1183	5777	28886	332	1500	0	16072	11690	6329	3092	74861	20%
Railways	0	0	0	0	594	0	0	0	1007	0	0	1601	0%
Roads	0	0	21734	408	1644	0	0	0	122356	26169	4597	176908	47%
Tourism	92	877	1067	227	984	55	0	0	0	891	294	4487	1%
Urban Development	220	1012	5372	4809	4610	467	0	0	2690	2372	7496	29048	8%
Total	**312**	**3112**	**33950**	**51119**	**8381**	**20380**	**14400**	**16072**	**137743**	**43117**	**48361**	**376947**	**100%**

(Source: pppndiadatabase.com)

In terms of main types of PPP contracts, almost all contracts have been of the BOT/BOOT type (either toll or annuity payment models) or close variants. Management and lease contracts have largely been popular in the water sector as the sector continues to exhibit characteristics of a public good and absence of a regulatory environment for cost recovery

In terms of approach to provider selection, almost all the projects were competitively bid (either national or international competitive bidding).

1.3 Status of PPP Infrastructure related legislative/political framework in India

1.3.1. Overview

Initial activity in PPP started with the power and transportation sector during the mid 1990s. It is now well accepted in India that lack of adequate infrastructure is a critical constraint needed to be alleviated for the economy to sustain a growth rate of 8%-10% over a longer period. The government has increasingly been adopting PPP models across most infrastructure sectors. Despite frequent changes in government, the PPP process in different sectors has steadily matured over the last few years. None of the major decisions relating to PPP have been reversed by subsequent governments. Though there is no comprehensive central PPP legislation or regulation cutting across all sectors and all types of projects, the government has been able to create an enabling environment for private participation with different initiatives.

A comprehensive policy framework for public private partnership (PPP) in the building of physical infrastructure and social sectors such as health and education is on the anvil. The policy will lay down guidelines for the entry of private players and implementation of infrastructure projects of both the Centre and the states. The new PPP policy would rest on three pillars.

- The first pillar of the policy's architecture is to ensure security in legal framework while not becoming excessively prescriptive.
- The second key pillar of the PPP policy would be a codification of the vast array of initiatives that have already been undertaken by the Government in the past to promote PPPs in the country
- The third pillar of the policy is the establishment of processes that are required for second generation PPPs with focus on appropriate public oversight and monitoring of PPP projects and ensuring that a value for money rationale is adopted while developing projects

Today, a political will has developed in India to induct private sector in the development of new infrastructure. A directive has gone out from the Ministry of Finance that all Central government departments should also consider the feasibility of a PPP model in deciding on the best way to develop infrastructure. This political will has translated into a PPP program which is more advanced in some sectors as compared to others and also one that is improving year on year. Alongside a regulatory structure is also emerging. One of the reasons for the

political will has been that in most sectors governments have faced little opposition from users in paying user charges for the higher quality services offered.

Another reason for the rapid acceptance of the PPP model in India has been that domestic banks and financial institutions have been active in the project financing market. Large projects like airports, power projects and container terminals have been domestically financed at competitive rates. The financial institutions have also shown a strong appetite for more such projects.

1.3.2. Scheme of concession for PPP Infrasturucture

Planning Commission has published several Model Concession Agreements (MCAs) with the objective of specifying an appropriate balance of risks and obligations and also for establishing a faster rollout of PPP projects in a fair and transparent manner. The framework that has been evolved in the MCAs is comprehensive and conforms to internationally accepted principles and best practices. In sectors that do not have duly approved MCAs, the project-specific concession agreements should adopt similar provisions. Table 1-8 provides salient features of MCAs by sectors through the MCAs for Ports and Highways as representatives.

- Sector Wise status of concession agreements[2]:
  - **Power**: Available for Standard PPA for Generation and MCA for Transmission, but there are no standard MCA available for Distribution.
  - **Water**: There is no standard MCA available for the water supply and sanitation sector. The concession agreements are project specific in nature
  - **Roads**: Available for PPP in National Highways (four laning), PPP in National Highways (six laning); PPP in state highways, PPP in operation & maintenance of highways.
  - **Railways**: Available for PPP in Container Train Operation, PPP in Redevelopment of Railway Stations, PPP in Urban Rail Transit Systems, Procurement-Cum-Maintenance of Locomotives
  - **Ports**: Available for PPP in Ports
  - **Airports**: Available for green field and non metro airports

[2] http://infrastructure.gov.in/mca.htm

Table 1-8 Salient features of the Model Concession Agreements providing the policy and regulatory framework for PPP in major ports3 and national highways* in India

Parameters	Provisions of MCA	
	Major Ports	*National Highways*
PPP model	DBFO – Design, Build, Finance Operate	
Concessioning Authority	Respective Major Port Trusts	National Highways Authority of India
Bidding Process	Two stage bidding process • RFQ based on technical and financial criteria • RFP based on bidding parameter	
Bidding parameters	Royalty to be paid monthly as a %age of the Gross Revenues	Grant required by the bidder/ revenue share offered
Restriction on foreign investment	100% FDI under automatic route	
Concession period	Usually 30 years but may be changed on case to case basis	• The criteria for fixing concession period is the time in which the design traffic would equal the projected traffic

[3] In Indian Ports sector, there exist other categories of port than Major Ports, such as Minor Ports owned by regional government or Private Ports owned by private entity.

Parameters	Provisions of MCA	
	Major Ports	*National Highways*
		• The standard concession periods are: – 12 years for 4-laning projects – 20 years for 6-laning projects
Construction period	Included in the concession period	
Revenue model for concessionaire	It can collect charges for the port services offered including the real estate comprising the project site	Collection of toll charges from users and annuity payments, if any, from the NHAI
Pricing policy	• Maximum tariff charges for various services to be notified by Tariff Authority for Major Ports (TAMP) • Tariff fixed on the basis on cost + return on capital employed • Tariff varies from commodity to commodity and port to port • Tariffs revised every 3 year for up to 40-60% of	• Toll rates per km according to different categories of vehicles as specified by NHAI • To be revised annually @ 3% simple interest + 40% of the change in WPI • Certain categories of vehicles like cycles and animal-drawn vehicles are not tolled • Toll charges not related to distance travelled by a particular vehicle on the highway

Parameters	Provisions of MCA	
	Major Ports	*National Highways*
	the variation in WPI	
Financial Closure	90 days from the agreement date	180 days from Agreement date extendable by another 120 days on payment of damages
Responsibility for procuring land	The project site and the project assets are to be handed over to the concessionaire as a condition precedent (before financial close)	• Right of way and land to be procured by the NHAI within the specified timeframe; penal clauses if RoW not provided within the stipulated timeframe • RoW of at least 80% of the site area for 4-laning or 60% of the area required for 6-laning to be provided before Appointed Date
Responsibility for approvals	• All clearances including the approval from Ministry of Environment and Forests to be obtained by the Port Trust as a condition precedent • Applicable permits to be obtained by the concessionaire as specified in the concession agreement • Explanation: in matters falling within its domain, the Port Trustis expected to get the	• Cost of application and renewal to be borne by the concessionaire • Permits relating to environment conservation and site protection to be obtained by the Authority • Other permits and approvals to be borne by the concessionaire

Parameters	Provisions of MCA	
	Major Ports	*National Highways*
	approvals, in others the concessionaire has to get them with the help of the Trust	
Extension/Decrease of concession period	May be increased if the change in circumstances (like change in law, delay in completion without concessionaire's fault) so warrant	• Allowed if the actual traffic is substantially different from the expected traffic • For every 1% shortfall in target traffic, concession period to be increased by 1.5%; total increase capped at 20% • For every 1% excess in actual traffic, concession period to be reduced by 0.75%; total decrease capped at 10%
Monitoring of concessionaire	Independent Engineer to be appointed by the Port Trust for monitoring construction works, issues completion certificate, determines the costs of works etc.	
Utilities	Port Trust to ensure that the concessionaire receives utilities like water and electricity at no favorable terms than are available to other commercial consumers. However, it cannot be	• Cost of shifting utilities like water pipes to be borne by NHAI • Existing roads/utilities to kept in operation at concessionaire's cost

Parameters	Provisions of MCA	
	Major Ports	*National Highways*
	held liable if it fails to do so.	
Escrow	• All project inflows like toll receipts, insurance proceeds to be deposited in the escrow account • Withdrawals from the escrow account according to the waterfall mechanism specified in the concession agreement	
Payments to Implementing authority	• License fee in lump sum or in instalments to be paid • Royalty to be paid monthly as a %age of the Gross Revenues • Royalty payment to commence from the date on which concessionaire begins to provide project services	• Concession fee Re 1 per annum • Concessionaire may also propose a revenue share to the NHAI • The revenue share would increase @ 100 bp annually
Minimum Traffic	The concessionaire has to guarantee a pre-specified minimum amount of cargo on an annual basis	No minimum traffic guaranteed by the concessionaire

(Source: MCA for Ports, MCA for National Highway)

1.3.3. Institutional Framework – PPP

The institutional and regulatory framework for PPP projects can be categorised into the following:

- High level institutions with cross-sectoral jurisdiction:
  - The government has formed various institutions and committees for enabling PPP procurement process and monitoring process. These include the Committee on Infrastructure (CoI), Planning Commission including PPP Appraisal Unit (PPPAU)) and, PPP Appraisal Committee (PPPAC)

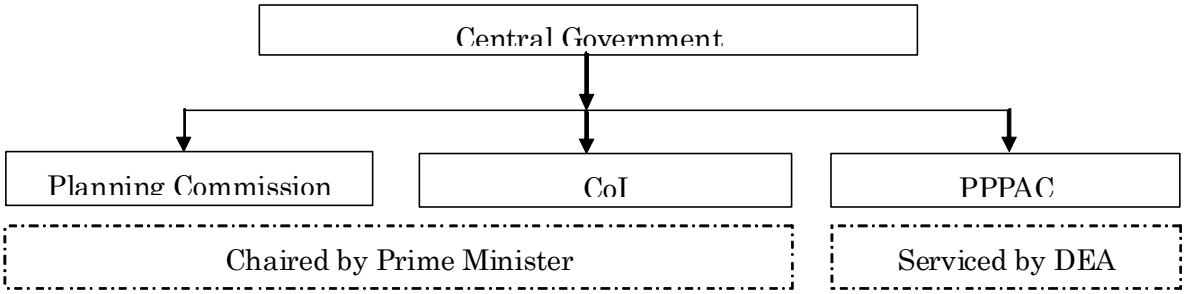

Figure 1-2 Structure of high level nodal institutions

(Source: by Study Team)

  - Govt Ministries: These include Ministry of Finance (MoF), Department of Economic Affairs (DEA) including PPP cell in DEA and, PPP coordinates in line ministries. Nodal entities such as National Highway Authority of India and Rail Vikas Nigam Limited have also played a pivotal role in catalysing PPP projects in roads and railways respectively.

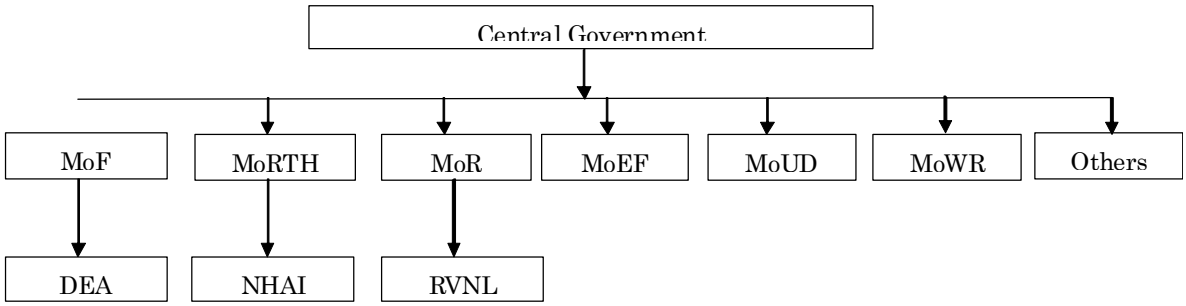

Figure 1-3 Structure of Central Ministies

(Source: by Study Team)

– Institutional mechanisms for PPP financing : These include 1) Viability Gap Funding (VGF), the Empowered Committee and , Empowered Institute for VGF, 2) India Infrastructure Finance Company Limited (IIFCL), 3) India Infrastructure Project Development Fund, and 4) other institutions like IDFC, IL&FS, and other financial institutions including commercial banks
– State level institutions: These include PPP cells, Line ministries, and other institutions in specific states.

Table 1-9 Institutional Framework for PPP in India

Name	Role
High-level institutions/ committees	
Committee on Infrastructure (CoI)	It was instituted under the Chairmanship of the Prime Minister in 2004 with an objective to initiate policies that enable creation and management of infrastructure, facilitate mechanisms for PPPs, and monitor the progress of key infrastructure projects. The committee has since issued guidelines for implementation of PPP projects including bidder selection guidelines, specifications and standards for projects, model concession agreements, and financing plans. http://infrastructure.gov.in/pppprojects/index.php
PPP Appraisal Committee (PPPAC)	It is an important institution for approval of PPP projects which was established in 2005. PPPAC first gives in principle approval to a project put forth by a central government ministry / autonomous undertaking and sends it to DEA, Planning Commission and concerned line ministries for approval. Subsequent to their approval, PPPAC gives final approval to the project. http://www.pppinindia.com/pdf/guidelines_approval_central_sector_ppp_projects_english.pdf
Planning Commission	It is the apex planning body of government. It plays a pivotal role directly and through PPP Approval Committee (PPPAC) as a member and PPP Appraisal Unit (PPPAU), a unit created to appraise PPP projects and suggest suitable modifications. In addition, the Planning Commission is responsible for formulating an umbrella policy for regulation of infrastructure sector as a whole. http://planningcommission.nic.in/aboutus/history/index.php?about=funcbody.htm
Government ministries/ nodal entities	
Ministry of	The Ministry of Finance is the nodal ministry responsible for examining

Name	Role
Finance (MoF)	concession agreements from the financial angle, deciding on guarantees to be extended, and generally assessing risk allocation from the investment and banking perspectives. Reference Website: http://finmin.nic.in/
Other Line Ministries (Roads, Ports, Civil Aviation, etc)	These play an important role in identification of projects within their respective areas. They are also part of the PPPAC as project sponsor to suggest necessary modifications before approval of project. Nodal officers have been nominated in key line ministries such as Urban Development, Civil Aviation, Road Transport, Railways etc for coordination of PPP projects. *Ministry of Road Transport & Highways (MoRTH):* http://morth.nic.in *Ministry of Railways (MoR*): http://www.indianrailways.gov.in/ *Ministry of Environment & Forests (MoEF):* http://moef.nic.in/ *Ministry of Urban Development (MoUD):* http://www.urbanindia.nic.in/ Ministry of Water Resources (MoWR): http://wrmin.nic.in/
Department of Economic Affairs (DEA)- Ministry of Finance	DEA is the nodal agency of the Union Government to formulate and monitor country's economic policies and programmes having a bearing on internal and external aspects of economic management. Department of Economic Affairs services the Public Private Partnership Approval Committee (PPPAC). The PPP cell with DEA coordinates the PPP related activities at central level, including VGF (detailed later) and appraisal of PPP projects at the centre http://www.finmin.nic.in/the_ministry/dept_eco_affairs/infrastructure_div/I&I_index.asp?pageid=2#PPPCell
National Highway Authority of India	NHAI is the nodal agency responsible for development of National Highways (NHs) and is responsible for awarding concessions for NHs. It has played a pivotal role in furthering PPP in road sector through preparation of the model concession agreement. [.] www.nhai.org/
Rail Vikas Nigam Limited	RVNL is a wholly owned government SPV created to undertake project development, mobilize financial resources and implement projects pertaining to strengthening of rail connectivity across the Golden Quadrilateral and Port Connectivity projects. Golden Quadrilateral project involves strengthening and four laning of high-density corridors of 5,846 Kms connecting Delhi-Kolkata-Chennai-Mumbai http://www.rvnl.org/
PPP financing mechanisms	

Name	Role
Viability Gap Funding	This scheme of government support is envisaged to bridge the viability gap of infrastructure PPP projects upto a maximum of 20% of project cost[4] in cases where the project is awarded on competitive bidding and the private party has 51% or more equity stake. Eligible sectors for VGF include roads and bridges, railways, seaports, airports, power, urban transport, cold chains and post harvest storage. An Empowered Committee and an Empowered Institution have been established for approving financial assistance up to USD 50 million and USD 25 million respectively, for projects which satisfy the eligibility criteria of the VGF scheme. As of March 2011, in-principle approval has been given to around 40 projects (mostly in Road sector) having a project cost of USD 3.55 billion (VGF approved USD 684.6 Million).
India Infrastructure Finance Company Limited (IIFCL)	It was established in 2006 with a mandate to provide long term debt for infrastructure projects either by way of refinance or by direct lending, upto 20% of capital cost, to project companies with a preference for infrastructure PPP projects. IIFCL has a cumulative disbursement target of Rs. 25,000 crore(USD5.5 billion) by March 2012. ***IIFC (UK) Limited*** has been created following budget 2007-08 announcement with a view to supplement financial resources for infrastructure development. IIFCL (UK) is mandated to extend long term loans in foreign currency to infrastructure projects in India for import of capital equipment and machinery and raise funds from the Reserve Bank of India, out of foreign exchange reserves. The RBI has approved the proposal for subscription in the US dollar denominated bonds, to be issued by IIFC (UK) Limited, up to a maximum aggregate issuance of USD 5 billion IIFCL under consultation with the key stakeholders has formulated a ***"take out financing scheme"*** in Budget 2009-10 to help reduce the cost of debt for projects that are in operations phase. The scheme has been implemented and seven projects have been sanctioned with a debt of Rs.1,500 crore with another Rs. 5,000 crore will be sanctioned during 2011-12.
India Infrastructure	IIPDF was announced in the Budget for 2007-08 and was subsequently created with a corpus of USD 25 million to quicken the pace of preparation of

[4] The sponsoring ministry, state government or statutory entity can provide support over and above VGF subject to a maximum of 20% of project cost

<table>
<tr><th>Name</th><th>Role</th></tr>
<tr><td>Project Development Fund</td><td>a shelf of bankable projects which can be offered for competitive bidding. Upto 75% of the feasibility level project development cost may be financed from this fund as interest free loan and is envisaged to be recovered from the successful bidder. If the project does not take off, then the same is converted to a grant. Various state governments and local bodies can avail of this facility for developing PPP projects. Source http://www.pppinindia.com/pdf/scheme_Guidelines_India_Infrastructure_Project_Development_Fund-English.pdf</td></tr>
<tr><td colspan="2">Specialised infrastructure sector financial institutions</td></tr>
<tr><td>IDFC</td><td>IDFC was established in 1997 and is mandated to provide thought leadership to facilitate movement of private capital in infrastructure sector. Its focus areas include energy, transportation, telecommunication and IT, and industrial and commercial infrastructure such as SEZs, industrial parks, etc. As on December 2010, IDFC had a total exposure of Rs. 57,558 crore and disbursements of Rs. 39,593 crore. Shareholding pattern of the company as on March 31 ,2011 is given below
<table>
<tr><th>Holder's Name</th><th>% Share Holding</th></tr>
<tr><td>OtherCompanies</td><td>3.86%</td></tr>
<tr><td>ForeignInstitutions</td><td>51.10%</td></tr>
<tr><td>CentralGovt</td><td>17.89%</td></tr>
<tr><td>FinancialInstitutions</td><td>14.08%</td></tr>
<tr><td>GeneralPublic</td><td>8.62%</td></tr>
<tr><td>NBanksMutualFunds</td><td>3.81%</td></tr>
<tr><td>ForeignNRI</td><td>0.32%</td></tr>
<tr><td>Others</td><td>0.32%</td></tr>
<tr><td>ForeignOcb</td><td>0.00%</td></tr>
<tr><td>Total</td><td>100.00%</td></tr>
</table></td></tr>
<tr><td>IL&FS</td><td>IL&FS is one of India's leading infrastructure development and finance companies with a mandate of catalysing the development of infrastructure in the country. It focuses on commercialisation and development of infrastructure projects. IL&FS had a total asset base of Rs. 71,689.34 crore as on March 2010. Current shareholding pattern of Il&FS is given below
<table>
<tr><th>Shareholder</th><th>Percentage (%)</th></tr>
</table></td></tr>
</table>

<table>
<tr><th>Name</th><th>Role</th></tr>
<tr><td></td><td>
<table>
<tr><td>Life Insurance Corporation of India / UTI</td><td>27.08</td></tr>
<tr><td>ORIX Corporation, Japan</td><td>23.87</td></tr>
<tr><td>Abu Dhabi Investment Authority</td><td>11.49</td></tr>
<tr><td>Housing Development Finance Corporation Limited</td><td>10.87</td></tr>
<tr><td>Central Bank of India</td><td>8.64</td></tr>
<tr><td></td><td></td></tr>
<tr><td>State Bank of India</td><td>7.23</td></tr>
<tr><td>IL&FS Employees' Welfare Trust</td><td>9.88</td></tr>
<tr><td>India Discovery Fund Limited</td><td>0.70</td></tr>
<tr><td>Bay Capital Investment Managers Private Limited - A/c PMS Client Account</td><td>0.24</td></tr>
<tr><td>Total</td><td>100.00</td></tr>
</table>
</td></tr>
<tr><td>Power Finance Corporation</td><td>PFC was set up in July 1986 for financing and integrated development of the power and associated sectors. It is one of the largest financial institutions that provide a range of financing options for power sector projects. During 2009-10 the total disbursement by PFC stood at Rs. 25,808 crore. PFC is also the nodal agency for undertaking preparatory activities for ultra mega power projects and for subsequently bidding them out to potential investors.The shareholding pattern of PFC as on 31-12-2011 is as follows
<table>
<tr><th>Holder's Name</th><th>% Share Holding</th></tr>
<tr><td>President of India</td><td>89.78%</td></tr>
<tr><td>FIIs</td><td>3.51%</td></tr>
<tr><td>Indian FIs & Banks</td><td>2.21%</td></tr>
<tr><td>Bodies Corporate</td><td>2.08%</td></tr>
<tr><td>Resident Individuals</td><td>1.34%</td></tr>
<tr><td>Mutual Funds</td><td>0.88%</td></tr>
<tr><td>Employees</td><td>0.08%</td></tr>
<tr><td>Others</td><td>0.13%</td></tr>
<tr><td>Total</td><td>100%</td></tr>
</table>
</td></tr>
<tr><td>Infrastructure Debt Funds</td><td>The Government announced creation of an infrastructure debt fund under Budget 2011-12 to facilitate long-term debt financing in the sector. The guidelines on the same are expected to be released in June 2011. The concept</td></tr>
</table>

Name	Role
	paper on the same can be accessed at at http://infrastructure.gov.in/pdf/INDIA%20INFRASTRUCTURE%20DEBT%20FUND%20010610%20CLEAN.pdf
other financial institutions and commercial banks	Commercial Banks and non-banking Financial Institutions are the major sources of infrastructure finance in India. The commercial banks comprising public sector banks, private banks and foreign banks account for almost three-fourth of the Infrastructure debt.
State Level Financial Institutions	There are 18 State Financial Corporations (SFCs)[5] and 56 State Industrial Development Corporations (SIDCs). SFCs provide financial assistance (equity and debt) for projects. SIDCs are involved in setting up of medium and large industrial projects in the joint sector/assisted sector in collaboration with private entrepreneurs (PPP) or wholly-owned subsidiaries.
State level PPP initiatives	
States with special legislation for PPP	Gujarat, and Andhra Pradesh have enacted special legislations and specific institutions for infrastructure development through PPP that cuts across sectors and have created institutions for undertaking these initiatives
States with cross sector facilitation but no special legislation	States such as Karnataka, Rajasthan, Uttaranchal, and West Bengal provide cross-sectoral facilitation through institutions established in JV with infrastructure development and financing entities. Some examples include PDCOR- a JV between Government of Rajasthan and IL&FS, and IWIN- a JV between ICICI Bank group and the Government of West Bengal
State with line departments directly dealing with PPP development	States such as Madhya Pradesh, Maharashtra, and Tamil Nadu which have had line departments and sectoral agencies taking the lead in developing and implementing PPP. These include Madhya Pradesh Road Development Corporation, the Maharashtra State Road Development Corporation and the Maharashtra Metropolitan Region Development Authority (MMRDA)

[5] In addition to 18 SFC's, Economic Development Corporation (EDC), Goa has a twin status of SFC and SIDC

1.3.4. Institutional Setup –Sector wise

(1) Power

- Central/ State Government

The function and duties of Central/ State government under the present regulatory framework is primarily focussed on policy formulation and in ensuring the development of the system in order to ensure optimal use of resources. The centre is responsible for preparation, publication and review of national electricity policy and tariff policy in consultation with CEA and state governments.

- Central Electricity Regulatory Commission (CERC)

The key functions of CERC include regulation of tariff of generating companies owned/ controlled by the centre and those having composite scheme for generation and sale of electricity in more than one state; regulation& tariff determination of inter-state electricity transmission; issue of licences for transmission and trading and advisory for the central government on key issues.

- State Electricity Regulatory Commission (SERC)

The key functions of SERC include determination of tariff within the state; regulation of electricity purchase and procurement of distribution licenses; facilitation of intra state transmission and wheeling of electricity; issue licenses within the state and advisory for the state government in key matters.

- The Appellate Tribunal for Electricity

Appellate Tribunal for Electricity (ATE) India has been set up to hear appeals or original petitions against the orders of the adjudicating officer or CERC or SERC constituted under various secitons of the EA 2003.

- Central Electricity Authority (CEA)

The functions of CEA include advisory to central government; specification of technical standards, safety requirements and grid standards; research & investigation in matters relating to generation, transmission, trading and distribution of electricity.

- National Regional Load Despatch Centre (NRLDC)

National Load Despatch Centre has been set up for optimum scheduling and despatch of electricity among the Regional Load Despatch Centres. It is an apex body to ensure integrated operation of the national power system. National Load

Despatch Centre can not engage in the business of trading in electricity.

- Regional Load Despatch Centre (RLDC)

The central government has established a centre for each region to be known as the Regional Load Despatch Centre having territorial jurisdiction as determined by the Central Government. Regional Load Despatch Centre can not engage in the business of trading in electricity.

- State Load Despatch Centre (SLDC)

Each state government has established a centre for the state called State Load Despatsch Centre primarily to ensure in integrated operation of the power system and optimum scheduling and despatch of electricity within the state.

(2) Water

- Ministry of Water Resources (MoWR)

MoWR is responsible for overall planning and management of the water resources in the country. MoWR has various organizations under its purview that provide overall monitoring, technical, research and training support.

- Ministry of Urban Development (MoUD)

MoUD is the nodal Ministry for policy/guidelines formulation in urban water supply and sanitation sector. Its responsibilities also include sponsoring & supporting programmes and coordinating & supporting state programmes through institutional expertise and finance. The ministry is also responsible for managing international sources of funds.

  - **JnNURM**: JnNURM is a reform driven programme announced by the Government of India in December 2005 to address the multi-dimensional challenges facing the urban sector in general and urban water supply in particular. Public Private Partnerships (PPPs) have been a major focus area under the programme. Water supply projects amounting to Rs. 19,681 crore have been approved under JnNURM so far.

- Ministry of Environment and Forests (MoEF)

  - **Central Pollution Control Board (CPCB)**: CPCB is responsible for monitoring pollution levels in industrial units.
  - **National Rivers Conservation Directorate (NRCD)**: NRCD is responsible for river management in the country

- Ministry of Agriculture (MoA)

MoA is responsible for planning, formulation, monitoring & reviewing of various watershed based development projects & activities.

- Planning Commission

Planning Commission is entrusted with the responsibility of planning and allocation of central government funds through five year plans for various water (irrigation/ hydropower/ multipurpose) projects in different states.

- Water-a state subject

As water supply and sanitation is a state subject, the state government is responsible for development and management for financing, cost recovery and management of surface irrigation and water supply and sanitation related activities within their territory. Different states have different institutional set ups - State-level Public Health Engineering Departments (PHEDs), specialized State-level WSS Boards, specialized city-level Boards, and Municipal Corporations (MCs) and Urban Local Bodies (ULBs) deal with urban WSS related issues.

(3) Roads

- Ministry of Road Transport and Highways (MoRTH)

MoRTH has primary responsibility of construction and maintenance of national highways, formulation and implementation of various policies. It also provided technical and financial support to state governments for the development of state road through the central road fund (CRF). The Ministry is headed by the Union Minister and the Minister of State.

- National Highway Authority of India (NHAI)

NHAI is an autonomous body established under the NHAI Act, 1988. Its primary responsibility is the development of National Highway Development Programme (NHDP). The other responsibilities include increasing private sector participation, implementation of road safety measures and enhancing use of IT. The authority is headed by a Chairman who is assisted by 5 members.

Presently, a comprehensive review of the NHAI Act 1988 is underway and proposal for amending the Act and the draft NHAI Bill are being prepared. The aim is to build institutional capacity of NHAI by making it a multidisciplinary body with high-quality financing and contract management expertise.

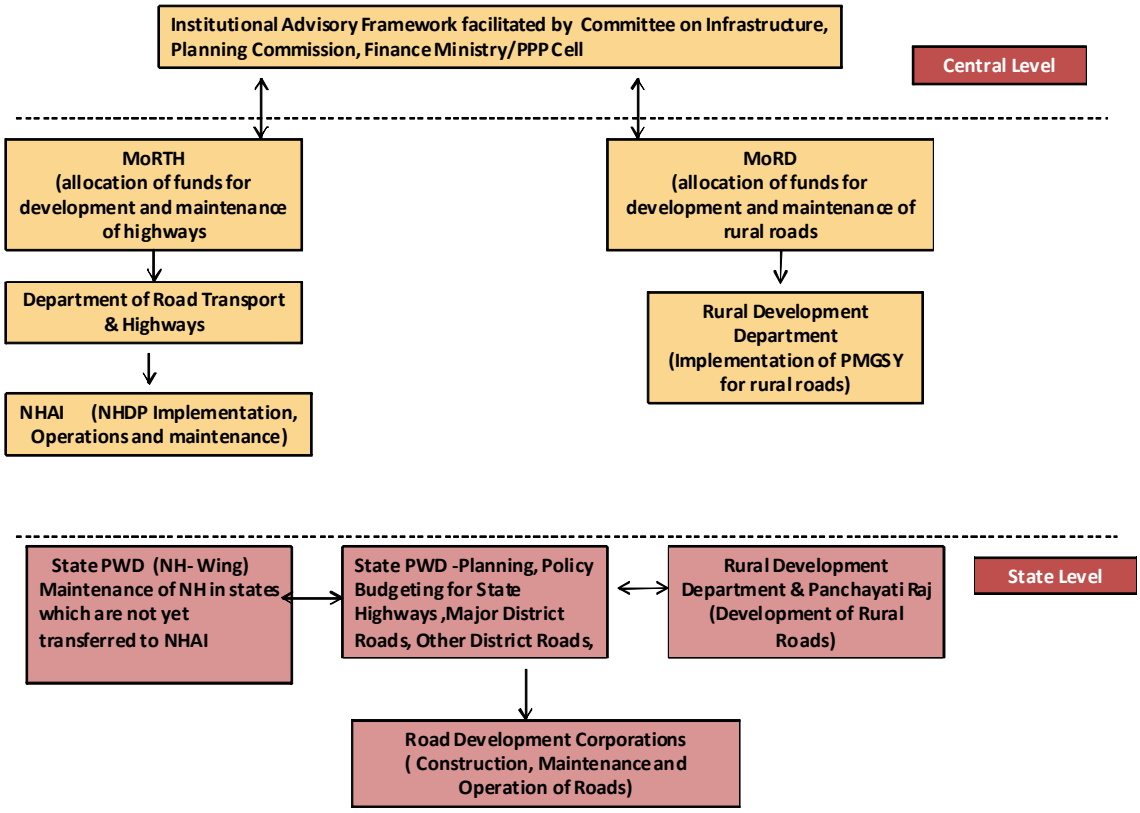

Figure 1-4 Institutional set up for the Roads and Highway sector
(Source: prepared by Study Team)

- State Roads

There is no fixed administrative structure in the states in terms of agencies for state road development. However, the agencies in different states are classified as:

– **Public Works Department (PWD)**: PWD are supposed to manage national highways, state highways, major district roads (MDRs) and other district roads (ODRs). Most states have PWDs with the exception of Andhra Pradesh and Gujarat which have roads & building department, and Tamil Nadu which has a highway department. PWDs are divided by Zones, with each zone headed by Chief Engineer. All zones together are headed by Engineer-in-chief with Secretary to state government as the overall head of the department.

– **Road Development Corporations**: Mandate for these corporations is to execute state road projects by raising finance through banks, markets and private sector. They function in addition to PWDs in seven states viz. Madhya Pradesh (MP), Karnataka, Gujarat, Andhra Pradesh (AP),

Rajasthan, Maharashtra and Kerala. The corporations are fully owned by state Governments and typically headed by a Chairman followed by Vice-chairman and Directors.

- Road Development Companies

These companies have been setup as 50:50 joint venture (JV) between the state government and Infrastructure Leasing and Financial Service Ltd. (IL&FS) to take up specific road projects. They presently exist in only two states, Tamil Nadu (Tamil Nadu Road Development Company) and Rajasthan (Road Infrastructure Company of Rajasthan).

- Infrastructure Boards:

The boards are responsible for facilitating flow of funds from the private sector and for co-ordination among various concerned state agencies. Gujarat, Goa, Himachal Pradesh (HP) and Punjab have set up Infrastructure Development Boards while Bihar has set up an Infrastructure Development Authority. The Boards are fully owned by state Governments and typically headed by a Chairman followed by Vice-chairman and other board members.

- Rural Development Authorities:

These authorities comprise of rural development departments and rural road development agencies. The departments look after overall development of rural infrastructure including roads and are headed by Minister of Rural Development followed by Secretary. Rural road development agencies are autonomous bodies responsible for overall implementation of Pradhan Mantri Gram Sadak Yojana (PMGSY) and headed by a Chief Executive Officer.

- PPP Cells

PPP cells have been setup in 15 states – AP, Assam, Bihar, Chhattisgarh, Gujarat, Haryana, Karnataka, MP, Maharashtra, Orissa, Punjab, Rajasthan, Tamil Nadu, Uttarakhand and Uttar Pradesh. The cell are responsible of capacity building of govt. Officials, creating shelf of bankable PPP projects, providing assistance to projects proposed for viability gap funding and in bid process. PPP cells are typically headed by a nodal officer reporting to Chief Secretary and also include PPP specialist, MIS specialist etc.

- Ministry of Rural Development

The ministry was setup to oversee rural development. The ministry

undertakes rural road development through the Department of Rural Development and National Rural Road Development agency (NRRDA). The department is responsible for the implementation of the on-going PMGSY headed by the Minister.

NRRDA extends support to PMGSY by advising the Ministry on technical matters and developing specifications. It undertakes project appraisal and monitoring management and submits periodic reports to the Ministry. NRRDA is also headed by the Minister followed by a Vice-President and a Director-General.

- Other Key Central Government Bodies

Agency	**Role**
Cabinet Committee on Infrastructure (CCI)	Established in 2009 to expedite implementation of Infrastructure projects
Committee on Infrastructure	Initiation of policies to ensure time-bound development of world class infrastructure. Prime minister is the chairman.
Planning Commission	Provides funds for capital investment through assessment and augmentation of resources
Ministry of Finance (MoF)	Formulation of fiscal policies and sanction funds for road sector
Public Private Partnership Appraisal Committee (PPP-AC)	Setup by Cabinet Committee on economic Affairs in 2005 for appraising and approving PPP projects proposed by the line ministries
Ministry of Environment and Forest (MoEF)	Grant of mandatory environment and forest clearance to road projects
Indian Roads Congress	Technical body of highway engineers. It formulates technical specifications and provides forum for sharing of knowledge on all research, policy and related matters
India Infrastructure Finance Co. Ltd (IIFCL)	Setup by MoF, it finances road projects
Border Roads Organisation (BRO)	Development of roads in border areas
Central Road Research Institute (CRRI)	Undertakes high quality research, collaborates in formulation of norms and provides specialised consulting services in all areas related to roads

(4) Railways

- Ministry of Railways (MoR)

MoR is responsible for the formulation and implementation of policies and programmes.

- Railway Board

The board was reorganised under the Railway Department upon recommendations of Railway Finance Committee. It manages the operations and projects of Indian Railways. The Board is headed by the chairman, followed by the financial commissioner and other Board members.

- Zonal Railways

There are 16 zones. Each zone office interchanges traffic with other. Each of the zones are headed by the General Manager who reports directly to the respective directly to the Railway Board.

- Public sector undertakings

There are 12 public sector units under the administrative control of MoR that look into specific areas.

PSU	**Area of Specialisation**
Container Corporation of India Ltd. (CONCOR)	Handling of Domestic and International container cargo
Centre for Railways Information Services (CRIS)	IT applications, Database management for IR
Dedicated Freight Corridor Corporation of India Ltd (DFCCIL)	Implementation of the Dedicated Freight Corridor
Indian Railway Construction ltd (IRCON)	Construction
Indian Railway Finance Corporation (IRFC)	Augmenting financial resources
Konkan Railway Corporation	First railway project executed on Build-operate-transfer basis
Rail land Development Authority	Commercial development of vacant railway land
Mumbai Rail Vikas Corporation	Implementation of Railway project under Mumbai Urban

(MRVC)	Transport Project
RailTel Corporation of India	Telecommunication
Rail India Technical and Economic Services Ltd (RITES)	Consultancy services
IRCTC	Upgradation and management of the catering and hospitality services at stations, on trains and other locations
Rail Vikas Nigam Ltd (RVNL)	Undertakes rail-port connectivity projects and financial resource mobilisation

(5) Industrial Zone Development

The SEZ Act, 2005 and SEZ Rules, 2006 were enacted for establishment, development, management and maintenance of SEZs and SEZ units. The SEZ Act was enacted on 23 June 2005 and SEZ Rules became effective from 10 February 2006. The Act and the rules lay down the conditions and procedures for granting approval to SEZ developers and SEZ units and. The Act also lays down liberalised fiscal incentives for:

① SEZ Act 2005 & SEZ Rules 2006

The Special Economic Zones Act, 2005 provides for the following:

- Procedure for preparing proposal to establish SEZ
- Establishment of SEZ with the approval from Board of Approvals
- Notifying an area as SEZ by Central Government
- Development Commissioner as administrative Authority for the SEZ
- Single window clearance by Approval Committee for setting up unit in SEZ
- Special Fiscal provisions for special economic zones
- Establishment of SEZ Authority
- Exemptions and relaxations from provisions of some Central Acts
- Power of the Central Government to make rules and to remove difficulties

The Special Economic Zones Rules, 2006 provides for the following:

- Simplification of procedures for development, operation, and maintenance of the Special Economic Zones and for setting up and conducting business in SEZs;
- Single window clearance for setting up of an SEZ;
- Single window clearance for setting up a unit in a Special Economic Zone;
- Single Window clearance on matters relating to Central as well as State Governments;

– Simplified compliance procedures and documentation with an emphasis on self certification; and
– A wide range of services can be rendered from SEZs.

In addition to the above Central Regulatory Regime, most of the states have or are in the process of enacting their respective SEZ Act or Policy.

② Related Institutions

- Board of Approval (BoA)

BoA is responsible for approving proposals for setting up SEZs, approving authorized operations in SEZs, granting FDI approvals to developers and approvals for infrastructure provision (through co developers.

- Approval Committee (AC)

AC is responsible for approving import of goods and services in the SEZ, proposals for establishment of SEZ units, allow for foreign collaborations/FDI proposals duly cleared by the Board of Approval and monitoring compliance by SEZ developers/units.

- SEZ Authority

SEZ Authority is responsible for monitoring of Infrastructure services & Export performance of the SEZ.

- Ministry of Commerce (MoC)

MoC is responsible for granting in principal approval, formal approval and notifying the SEZ.

- Development Commissioner (DC)

DC is responsible for granting all Local and State level Clearances delegated by Central/State Government; monitoring approvals, licenses, registrations; making town planning regulations. DC holds the power of a Labour Commissioner.

- Developer

A developer is responsible for plan development of SEZ; demarcation & development of sites; allocation & transfer of plots & buildings; compliance to the plan; development, operation & maintenance of infrastructure and demarcation of zone boundary.

1.4 Supporting scheme of PPP Infrasturcture by central government

1.4.1. Overviews

Over the years, the Government of India (GoI) has recognized the need for development of infrastructure in the country and has become aware of the fact that public financing alone may not be sufficient. Moreover, it has taken cognizance of the fact that some infrastructure projects may not be financially viable because of long gestation periods and limited returns further necessitating government support.

In a move to give thrust to infrastructure development through the PPP route, GoI has put in place three primary support mechanisms including – (i.) Viability Gap Funding (VGF) coordinated by Department of Economic Affairs (DEA), Ministry of Finance; (ii.) India Infrastructure Finance Company Limited (IIFCL), and (iii.) India Infrastructure Project Development Fund (IIPDF). The section below dwells on these support mechanisms in detail.

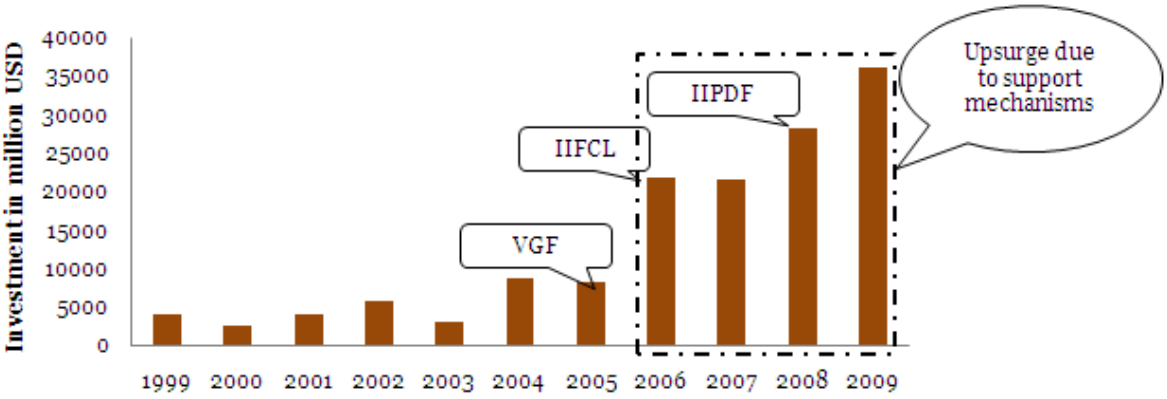

Figure 1-5 Trends in Private Investment in Infrastructure

(Source: PPIAF database)

The steps taken by the government have shown tangible results as reflected in Exhibit 1 above by facilitating private investment into the sector, addressing viability concerns, and providing low cost fund availability for longer tenures.

1.4.2. Supporting shceme by central government

(1) Viability Gap Funding (VGF)

① The Mechanism

Viability Gap Funding[6] (VGF) scheme was introduced with the intent of bridging the viability gap for infrastructure projects, which may not be financially feasible otherwise because of long gestation periods and limited

[6] http://www.pppinindia.com/guidelines-forms.php

financial returns. A PPP Cell within the Department of Economic Affairs, Ministry of Finance, and GoI was constituted for coordinating and dealing with proposals seeking viability gap funding and appraisal of PPP projects in the Central sector.

- Subject project type and project eligibility criteria

  - Viability Gap Funding under this scheme will normally be in the form of a capital grant at the stage of project construction
  - The scheme will apply only if the contract/ concession is awarded in favour of a private sector company in which 51% or more of the subscribed and paid up equity is owned and controlled by a private entity.
  - The project should belong to one of the following sectors - roads and bridges, railways, seaports, airports, inland waterways, power, urban transport, water supply, sewerage, solid waste management, cold chains & post harvest storage, other physical infrastructure in urban areas, infrastructure projects in special economic zones, international convention centres, other tourism related infrastructure.
  - A private sector company shall be eligible for VGF only if it is selected on the basis of open competitive bidding and is responsible for financing, construction, maintenance and operation of the project during the concession period.
  - The project should provide a service against payment of a predetermined tariff or user charge.

    - The concerned Government/statutory entity should certify, with reasons;
    - that the tariff/user charge cannot be increased to eliminate or reduce the viability gap of the PPP
    - that the Project Term cannot be increased for reducing the viability gap; and
    - that the capital costs are reasonable and based on the standards and specifications normally applicable to such projects and that the capital costs cannot be further restricted for reducing the viability gap.

- Mode of Financial Support and its Terms and Conditions

.According to "Guidelines for Financial Support to Public Private Partnerships in Infrastructure" established by GoI, the amount of VGF shall be 20% of the total project cost of each PPP project. In case the Ministry/State Government/government agency proposes to provide any assistance over and

above the said VGF amount, this also shall be restricted to another 20%. Therefore, up to a maximum of 40% of the total project cost could be provided through VGF from all sources.A Grant under this scheme shall be disbursed only after the Private Sector Company has subscribed and expended the equity contribution required for the project and will be released in proportion to debt disbursements remaining to be disbursed thereafter.

- Procedural Aspects

State Governments (or state agencies through State Governments) in case of state-level projects, or line ministries (or statutory authorities through line ministries) in case of central level projects, apply for the Viability Gap Funding. After the appraisal/ examination by DEA, Department of Expenditure and Planning Commission, the intended project seeks "in-principle approval" of the Empowered Institution which allows the implementing entity to prepare for the tender of concession. The concessionaire is selected through an open competitive bidding process. After the selection of concessionaire and formation of the subject SPV, formal application for VGF is made by the implementing agency (after the Lead Financial Institution for the project has presented its appraisal of the project) and the subsequent final approval is granted by the Empowered Institution.

A revolving fund of Rs. 200 crore is provided by the Finance Ministry to the Empowered Institution. The Empowered Institution shall disburse funds to the respective lead financial Institutions and claim reimbursement thereof from the Ministry of Finance.

A step by step procedure for approval of project proposal under VGF is given below;

Table 1-10 Procedures of approvals and disbursement for VGF

Category	No.	Procedure
Application	1	Project Identification after a techno economic feasibility and PPP analysis
	2	Approval by Project sponsoring authority • If grant required under VGF scheme then approval from Empowered Institution (for a VGF requirement of up to Rs 100 crore)/ Empowered Committee (for a VGF requirement of up to Rs 200 crore)/ Empowered Committee and Finance Minister(for a VGF requirement of more than Rs 200 crore) is required

Category	No.	Procedure
	3	The proposal for VGF shall be sent by sponsoring Administrative Ministry/State Government/statutory authority to the PPP Cell of the Department of Economic Affairs
In-principal approval	4	The proposal will be circulated by the PPP Cell to all members of the Empowered Institution for their comments
	5	PPP Cell will check whether the proposal conforms to the mandatory requirements of the scheme
	6	Comments received within four weeks shall be forwarded by the PPP Cell to the concerned Sponsoring Administrative Ministry/State Government/statutory authority, for responses to the comments
	7	The Department of Expenditure and Planning commission will examine the proposals with a view to ensuring that they conform to the conditions specified in the scheme.
	8	All project documents , comments and their responses submitted by PPP cell to to the Empowered Institution for consideration and 'in principle' approval
	9	The Empowered Institution will either approve the proposal in principle (with or without modifications) or advise the sponsoring concerned Ministry, State Government or statutory authority to provide additional clarifications/ information or to make necessary changes for further consideration of the Empowered Institution
	10	For projects owned by the Central Government or its statutory entities, approval of PPPAC shall also be obtained in accordance with the guidelines issued by the Ministry of Finance
Competitive bidding	11	Financial bids shall be invited by the concerned sponsoring Ministry, State Government or statutory entity for award of the project within four months of the in principle approval of the Empowered Institution
	12	The private sector company shall be selected through a transparent and open competitive bidding process.
Final approval	13	Within three months from the date of award, Lead Financial Institution shall present its appraisal of the project for consideration and Final approval of the Empowered

Category	No.	Procedure
		Institution.
	14	the Sponsoring Ministry, State Government or statutory authority proposing the project, shall certify that the bidding process conforms to the provisions of this scheme
	15	Grant of Final approvals by Empowered Institution
Disbursement	16	Empowered Institution, the Lead Financial Institution and the private sector company shall enter into a Tripartite Agreement
	17	VGF shall be released to the Lead Financial Institution after the Private Sector Company has subscribed and expended the equity contribution required for the project
Monitoring	18	The Lead Financial Institution shall be responsible for regular monitoring and periodic evaluation of project compliance send a quarterly progress report to the Empowered Institution

(Source: Prepared by Study Team referring pppinindia.com)

② The Results

As of March 2011, around 40 projects having a total project cost of Rs 164.9 billion (total VGF sought Rs. 31.8 billion) have got the in-principle approval with most of them, around 75 per cent, being in the roads & highways sector. Another 25 project proposals are under consideration having total project cost of Rs 291.94 billion. Table 1-11 illustrates projects at various stages of VGF approval – projects currently under consideration, those have been granted in-principal approval, and projects for which the bidding process has been completed, such that each set is exclusive of the other.

Table 1-11 Status of Projects seeking VGF (Mar, 2011)

Status of projects seeking VGF (March 2011)	No. of Projects	Sum of Total project Cost *(in Rs. Million)*
Proposals where bidding is completed	31	285,678
Proposal given in-principle approval	40	164,917
Proposals Under Consideration	25	291,934
Other Proposals	18	176,347
Grand Total	114	918,875

(Source: PPP India Website)

Further, Figure 1-6 below outlines the percentage break-up of total number of projects in different sectors, for various phases of approval.

Projects Granted approval where bidding process is completed (31	Projects Granted in-principle approval (40 nos.)	Projects under consideration (25 nos.)

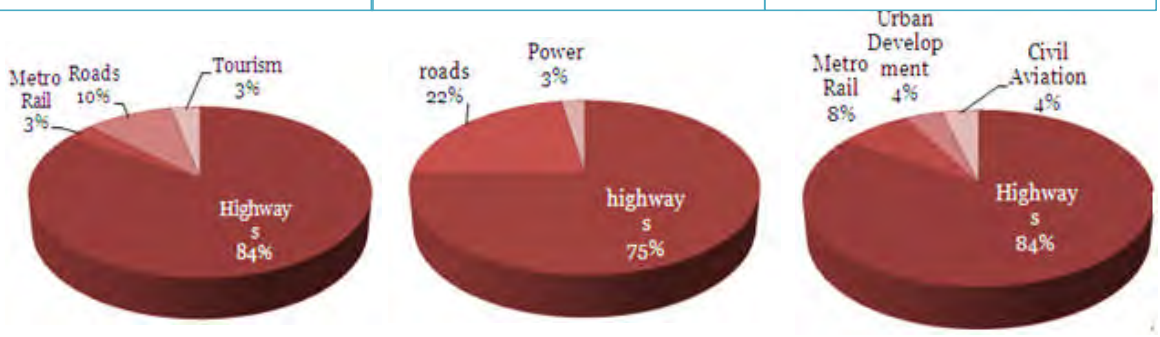

Figure 1-6 Sectoral distribution of projects

(Source: PPP India Website)

As indicated, the VGF beneficiary portfolio continues to remain dominated by the highway sector. Sectors like renewable energy and water supply & sanitation have not been the direct beneficiaries of VGF but have been receiving support by way of subsidy and incentive schemes (for renewable energy) and JNNURM (for water supply & sanitation).

③ Some Sector specific financial support programme by Central government

A brief on JNNURM programme and incentive schemes for renewable energy is as follows:

- JNNURM:

The Jawaharlal Nehru National Urban Renewal Mission launched in December 2005 is the Government of India's response to the challenges in the urban development in the country. Its focus is on investing in core infrastructure as well as implementing reforms in urban management/governance. A corpus of Rs 50,000 Crores (to be matched by counterpart funding from the state and local governments) has been earmarked for the 7year Mission period for 63 Mission Cities. The Mission provides grant support ranging from 35% to 90% which may be leveraged for PPP[7].

JNNURM is a reform-driven integrated and coherent program under Ministry of Urban Development, to develop and implement high impact projects in select cities of India. Under this programme, the urban development sectors receive special grant funding from the central and state governments. Water supply and sanitation with 61% share in the investments under JNNURM (as on Dec'10)

[7] Source :http://jnnurm.nic.in/

constitutes the single largest sector both in terms of number of projects executed as well as in terms of the total funding support. Table 1-12 below outlines the break-up of projects and approved cost for water supply, sewerage and waste management sectors under JNNURM programme.

Table 1-12 Break-up of approved projects under JNNURM programme

Rs. Crore	Number of Projects	Approved Cost (Amount Rs. in Crore)
Water Supply	152	19,681
Sewerage	107	14,737
Drainage	70	7,926
Solid Waste Management	43	2,060

(Source: Ministry of Urban Development, GoI)

JNNURM overall process is given below

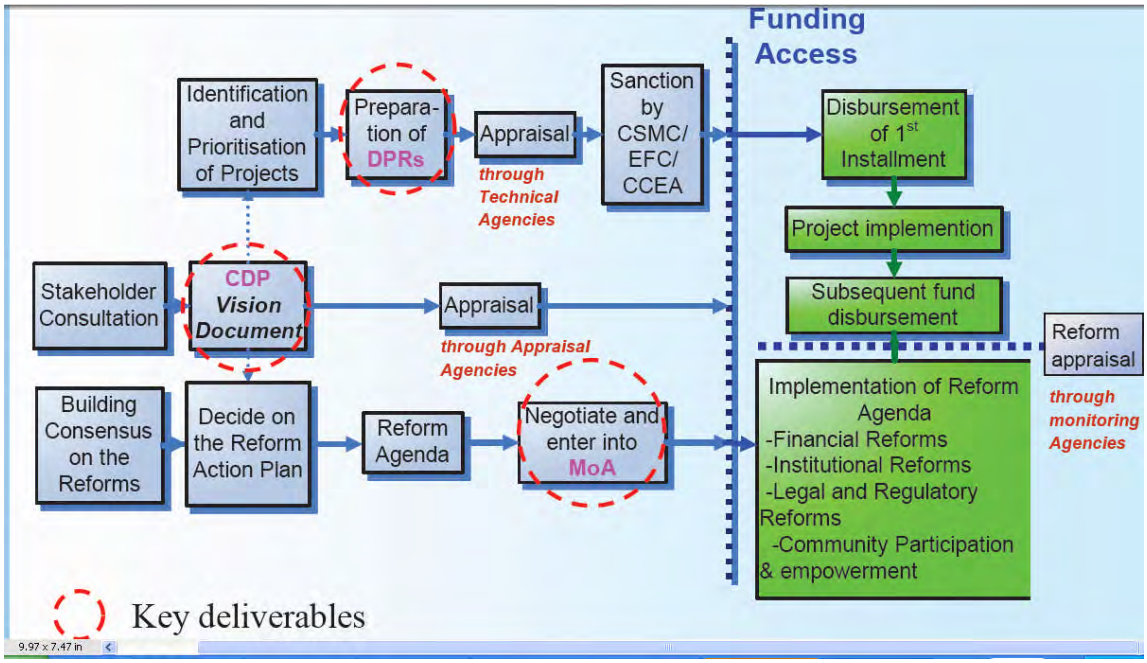

Figure 1-7 JnNURM overall process description

(Source: Ministry of Urban Development, GoI)

- Subsidy/Incentive for Renewable Energy Projects

The government (Ministry for New and Renewable Energy) has provided various incentives to facilitate including income tax holiday, accelerated depreciation, concessional duty/duty free imports and capital/interest subsidy to facilitate investment in the renewable energy sector. Further, initiatives like

Jawaharlal Nehru National Solar Mission (JNNSM) and subsidy on wind farms have been targeted at catalyzing investments in the sector.[8]

(2) India Infrastructure Finance Company Limited (IIFCL)

① The Mechanism

IIFCL was established in early 2006 with a mandate to provide financial assistance through long-term debt; either by way of refinance to banks and financial institutions or by direct lending to project companies. It lends up to 20% of the capital cost of a project. For project appraisal and lending operations, IIFCL relies on the lead banks associated with the respective projects. IIFCL is expected to raise funds from both domestic as well as external markets on the strength of GoI guarantees, which would be extended as necessary.

- Institutional setup, organization and management:

IIFCL is a wholly government owned company with a board strength of seven directors. IIFCL's board comprises a Chairman and Managing Director (CMD) and a whole-time Director (WTD) nominated by GOI. Apart from these two WTDs, GOI has nominated 3 experts and 2 officials as part-time directors of the company .Headed by Mr. S.K Goel, the board has representation from government, academia and financial institutions.

- Subject project type and project eligibility criteria:

Inbuilt in this scheme is a preference for Public Private Partnership (PPP) projects that are awarded to private companies selected through a competitive bidding process by defining the eligibility of the projects for financing by IIFC[9]

The eligible sectors in the IIFCL context are roads and bridges, railways, seaports, airports, inland waterways, other transportation projects, power, urban transport, water supply, sewerage, solid waste management, other physical infrastructure in urban areas, gas pipelines, infrastructure projects in special economic zones, international convention centres, other tourism related infrastructure, Special Economic Zones etc

- Mode of financial assistance

IIFCL renders financial assistance to commercially viable infrastructure projects through:

  – Direct lending to eligible projects

[8] :http://www.mnre.gov.in/
[9] http://www.pppinindia.com/pdf/IIFCL.pdf

- Refinance to banks and FIs for loans with tenor of five years or more.
- Any other method approved by the GoI

- Recent Initiatives

  - **IIFC (UK) Limited** has been created following budget 2007-08 announcements, with a view to supplement financial resources for infrastructure development. This subsidiary company of IIFCL would borrow funds from the RBI and lend to Indian companies implementing infrastructure projects in India, or to co-finance their External Commercial Borrowings for such projects, solely for capital expenditure outside India .IIFCL(UK) is mandated to extend long-term loans in foreign currency to infrastructure projects in India for import of capital equipment and machinery.
  - **Take Out Financing Scheme:** IIFCL under consultation with the key stakeholders has formulated a "take out financing scheme" in Budget 2009-10 to help reduce the cost of debt for projects that are in operations phase. IIFCL would provide takeout financing to individual Lender(s) to the extent of 75% of the residual amount of the loan on the Scheduled Date of Occurrence of Takeout. The objectives of this scheme are below. Seven projects in the roads and power sector, with a debt of Rs.1,500 crore have already been sanctioned under the scheme. Further, another Rs. 5,000 crore is expected to be sanctioned during 2011-12.

    - to boost the availability of longer tenor debt finance for infrastructure projects
    - to address sectoral / group / entity exposure issues and asset-liability mismatch concerns of lenders, providing debt financing to infrastructure project
    - to expand sources of finance for infrastructure projects by facilitating participation of new entities i.e. medium / small sized banks, insurance companies and pension funds.

② The Results

Figure 1-8 below outlines the PPP projects approved by India Infrastructure Finance Company Limited as on March 2011.

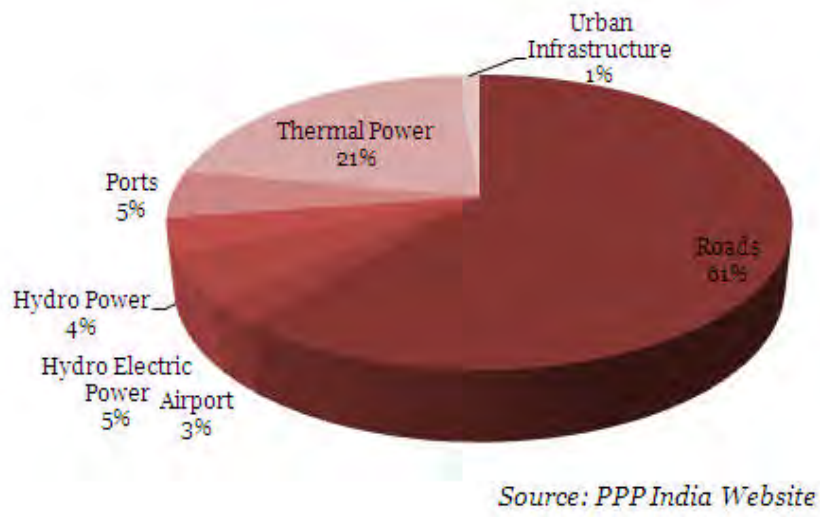

Figure 1-8 PPP Projects approved by IIFCL as on March 2011
(Source: PPP India Website)

As on March 2011, around 77 PPP projects having a total cost of Rs. 123510.7 crore were approved by IIFCL. The amount sanctioned for these projects stood at Rs. 17046 crore with disbursal being Rs.306 crore as of March 2011. IIFCL has a cumulative disbursement target of Rs. 25,000 crore by March 2012.

(3) India Infrastructure Project Development Fund (IIPDF[10])

① The Mechanism

GoI has established India Infrastructure Project Development Fund with 100 crore revolving corpus. It has been established with a view that most PPP projects require specialist support to ascertain project viability, feasibility and other preparatory works, which need to be funded by the sponsoring department.

Provision has been made to provide up to 75 per cent of total project development cost from GoI as long as there is a commitment from the sponsoring authority to bring in the balance 25 per cent. Also in such projects sponsoring agency/department/state can give additional 20 per cent of the project cost VGF support.

- Eligibility:

Ordinarily, 3 (three) types of projects can be proposed for funding under the IIPDF scheme:

– Revenue Generating Commercial Projects (Concession/BOOT or its variants/Lease contracts): A project FIRR of 20% or more on the private

10 http://www.pppinindia.com/pdf/scheme_Guidelines_India_Infrastructure_Project_Development_Fund-English.pdf

sector investment should be demonstrated. If the FIRR on the private sector investments below 20% even with VGF of up to 40% (maximum of 20% from VGF Scheme of GOI and 20% from the Sponsoring Authority) then the Project shall not ordinarily be presented before the Empowered Institution (EI).

- Efficiency Enhancement / Cost Savings Projects (Management or Service contracts or Engineering, Performance based O&M contracts): Where there is no or low private sector investment, the financial savings/enhanced revenues should ordinarily be able to recover payouts by government within eight to ten years of completion of the project. Annuity based project would also be covered under this category.
- Non-revenue generating projects with high economic returns (e.g. Sewerage System): In case of project undertaken in PPP formats based on Economic Returns considerations, the project eligibility will be based on sector preferences to be established by the EI and would be based on annuity payments by the sponsoring authority.

- Success Fee:

Project development funding, ordinarily, will be an interest free financial assistance to meet the project development expenses to be recovered from the successful private sector partner on award of the project. The Sponsoring Authority will reimburse the IIPDF, the project development expenses along with a fee up to 40% of the funding as provided below. The Sponsoring Authority must provide a plan for the same.

- **Revenue Generating Commercial Projects (Concession/BOOT or its variants/Lease contracts):** In case of revenue generating projects proposed to be implemented through private sector investments, the Memorandum for Consideration (MFC) must include a plan for recovery of the IIPDF amount with a success fee of 40%.
- **Efficiency Enhancement / Cost Savings Projects (Management or Service contracts or Engineering, Procurement and Construction (EPC) contracts with limited period performance based O&M contracts):** Where there is no or low private sector investment, the plan for recovery of project development expenses will be with a success fee of 25% .
- **Non-revenue generating projects with high economic returns (e.g. Sewerage System)**: In case of project undertaken in PPP formats based on Economic Returns considerations, project development funding may be considered merely as an interest free financial assistance to the project, to be repaid without any success fee, by the government.

② The Results

As on March 2011, 40 projects with a total project cost of Rs. 5878.9 crore (support sought under IIPDF was Rs. 4567.2 crore) were approved under IIPDF. Unlike VGF and IIFCL, the benefits of IIPDF have been capitalized by less lucrative urban development sub-sectors. Figure 1-9 below highlights the sector wise break-up of projects approved under IIPDF scheme as on March 2011.

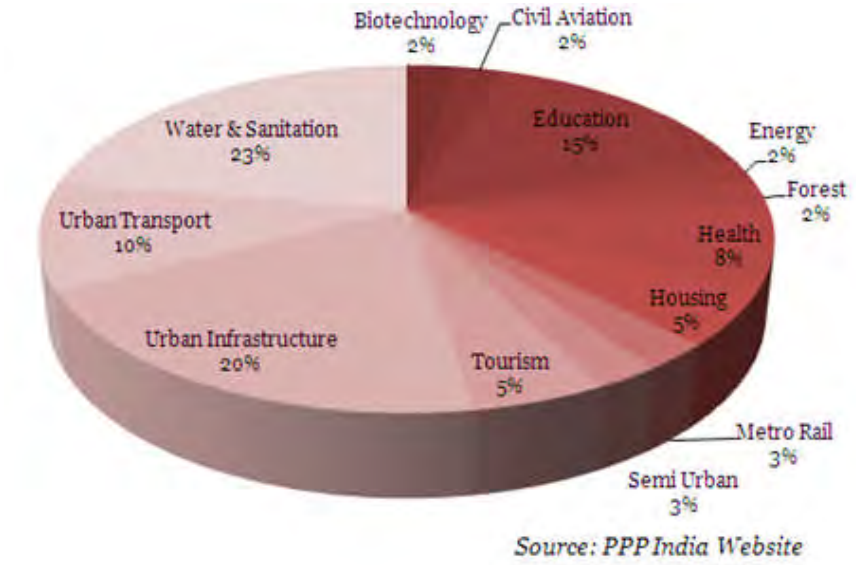

Figure 1-9 Projects approved under IIPDF as on March 2011
(Source: PPP India Website)

(4) Infrastructure Debt Funds

Since infrastructure projects have a long pay-back period, they require long-term financing in order to be sustainable and cost-effective. However, debt financing for infrastructure projects has been largely confined to banks who have difficulty in providing long-term debt due to their asset-liability mismatch. On the other hand, insurance and pension funds have stayed away on account of their risk perceptions. In view of the same, the finance minister announced creation of an infrastructure debt fund under Budget 2011-12 to facilitate long-term debt financing in the sector. The guidelines on the same are expected to be released in June 2011. Prior to this, there was a proposal announced in 2010 for the creation of a USD 10 bn US India Infrastructure Debt Fund to fund capital investments in the infrastructure sector.

① Concept Paper - India Infrastructure Debt Fund (presented in 2010)

The Fund would re-finance up to 85% of the outstanding project debt from senior lenders and help bridge the emerging gap in the total debt required for funding infrastructure projects that presently rely on commercial banks. The Fund would only lend to projects that have entered into commercial operation

after completion of construction. This would imply taking over of the existing debt of commercial banks and thus releasing their lending space for provision of loans to new projects. When the Fund is fully operational, it will also help create a secondary market for debt bonds.

- Sponsor:

The Fund will be set up by one or more sponsors (the "Sponsor"), who will act as the General Partners of the Fund. The Sponsors could be one or a combination of IIFCL, SBI, ICICI, LIC, IDFC, UTI, an infrastructure NBFC or an investment bank. A combination of two or three General Partners/ Sponsors may be preferred. In addition, the Sponsors may also include one or two foreign entities – such as IFC or ADB – as General Partners in order to enhance the credibility of the Fund from the perspective of foreign investors. The Sponsors would be required to invest at least 10% of the total investment in the form of subordinated debt.

② Proposal-US India Infrastructure Debt Fund

The dedicated debt fund proposed to finance projects in power, telecom, railways, ports and airports, agriculture, and food and food processing industry, apart from scaling up rural infrastructure. Investment banks, financial institutions, banks and large companies from the US had committed to take exposure in this fund. The governments have yet to take a final view and put in place the modalities however no timelines were decided for the same. According to indications, the fund may be scaled up to $100 billion over the years in case both sides agree to expand the infrastructure partnership. This would mean a 10-fold increase in the overall corpus of the initial fund.

1.4.3. Performance results of supporting scheme for foreign companies

1.5 Counterpart of investment acceptance in India

The jurisdiction for PPP procurement is spread across Central, state and local levels based largely on the allocation of business according to the Constitution. Legislative powers of centre and states are broken down into three lists as per the Seventh schedule of article 246 of the Constitution (Source: http://lawmin.nic.in/coi/coiason29july08.pdf) as :

- Central list, The longest list, comprising items of vital interests of the country such as defence, foreign affairs, foreign trade, currency, industries, natural resources, Railways, Highways declared by or under law made by Parliament to be national highways etc;
- State list, comprises public order, police, trade, land revenue, excise duty, States roads etc; and,

- Concurrent list, (over which both centre and state have joint jurisdiction), includes Ports , electricity, contracts, economic, and social planning, monopolies, trade unions, etc.

The following table broadly maps the jurisdiction for different services across various levels of government.

Table 1-13 Jurisdiction for PPP across different levels of government

Sector	Centre	State	Local
Roads and Highways	√ (national highways)	√ (state highways and other state roads)	√ (city roads)
Airports	√ (through Airport Authority Of India)	√ (in some states like Maharashtra, state level agency could award development of smaller airports)	NA
Ports	√ (for 12 major ports through administration of the Major Ports Trusts Act)	√ (minor ports). States could procure services through sector specific institution such as GMB in Gujarat or TIDCO in Tamil Nadu	NA
Metro rail		√ (through sector specific institutions such as MMRDA in Mumbai or BMRC in Bangalore or DMRC in Delhi)	NA
Railways	√ (through Railway Board, RVNL)		NA
Power	√ LargeThermal and Hydro Generation projects through NTPC and NHPC respectively. (Large transmission projects through PGCIL. also undertake procurement)	√ (through SEB or State Electricity Corporations or Private electrical utilities)	NA
Water and waste water		√ States Departments or state specific agencies	√ Urban local Bodies

(Source: prepared by Study Team)

There is no single central ministry or department responsible as counterpart for Investment acceptance in India .Procurement is largely decentralised process, and sponsoring authority (Central Ministry/State Government/ statutory entity)

who owns the underlying project assets and has the right to give concession to a Concessionaire will be the counterpart for Investment acceptance.

Table 1-14 below broadly maps the counterpart for investment acceptance across the sectors jurisdiction for different services across various levels of government. This is only a broad level mapping and the counterpart for investment acceptance may differ with sponsoring authorities depending on the projects on case to case basis.

Primarily the responsibility of Planning and approval and regulatory is by the state government for project subject governed by state list of constitution of India. If any central govt assistance in the form of VGF, IIPDF is required than a approval from PPPAC is also required. If there is a separate regulatory body existing then the regulatory role is undertaken by that body but in most of the cases the sponsoring authority also regulates and monitor the project

To illustrate - For National highways, which falls in Union list of constitution, planning , ,approving ,implementing and regulating body is NHAI .For State Highways (which falls in the State List of constitution) in the state of Punjab , the planning , approving , implementing and regulating body is Punjab state govt PWD department.

But in both the above cases if central govt assistance in the form of VGF is required than , PPPAC is also one of the additional approving authority whose approval is sought. The Planning body, approving, regulatory body differs from sector to sector and state to state and also differs based on the fact whether central govt assistance is required or not.

Table 1-14 Sponsoring authority for PPP across different sectors and levels of government

Sector	Centre	States(Gujarat, Maharashtra, Karnataka, Tamil Nadu, Haryana)
Roads and Highways	NHAI	• Gujarat State Road Development Corporation Ltd(GSRDC) • Maharashtra State Road Development Corporation Ltd, Public Works Department • Karnataka Road Development Corporation (KRDCL) • Tamil Nadu Roads and Bridges - Highways Department • Haryana State Roads & Bridges Development Corporation Ltd. PWD (B&R)
Ports		• Karnataka Department of Ports & Inland Water Transport

Sector	Centre	States(Gujarat, Maharashtra, Karnataka, Tamil Nadu, Haryana)
		• Gujarat Maritime Board (GMB), Gujarat • Kandla Port Trust, Gujarat • Maharashtra Maritime Board (MMB), Maharashtra • Jawaharlal Nehru Port Trust, Maharashtra • Chennai Port Trust, Tamil Nadu • Tuticorin Port Trust (TPT),Tamil Nadu
Airports	Airports Authority of India	Only Central level Authority
Metro rail		• Mumbai Metropolitan Region Development Authority (MMRDA), Maharastra • BANGALORE METRO RAIL CORPORATION Limited (BMRCL), Karnataka • Chennai Metro Rail Limited, Tamil Nadu • Metro link Express for Gandhinagar-Ahmedabad (MEGA) Company Ltd, Gujarat
Railways	Ministry of Railways RVNL, RLDA	Only Central Level Authority
Power	Large Thermal and Hydro Generation projects through NTPC and NHPC respectively. (Large transmission projects through PGCIL. also undertake procurement) Power Finance Corporation Ltd	State owned utilities for generation , distribution and transmission like - • Haryana Vidyut Prasaran Nigam Limited, HPGCL • Gujarat Urja Vikas Nigam Ltd • Gujarat Department of Power • Maharashtra State Power Generation Co. Ltd. • Maharashtra State Electricity Distribution Co.Ltd.(MSEDCL) • Maharashtra State Electricity Transmission Company Ltd • Maharashtra Energy Development Agency (MEDA) • Tamil Nadu Generation and Distribution Corporation (TANGEDCO) Ltd; • Tamil Nadu Transmission Corporation (TANTRANSCO) Ltd. • Karnataka Power Transmission Corporation Limited • Karnataka Power Corporation Limited • Bangalore Electricity Supply Company, Mangalore Electricity Supply

Sector	Centre	States(Gujarat, Maharashtra, Karnataka, Tamil Nadu, Haryana)
		Company, Hubli Electricity Supply Company and Gulbarga Electricity Supply Company
SEZ/ Industrial Estates		• Gujarat Industrial Development Corporation (GIDC), • Maharashtra Industrial Development Corporation (MIDC), • Karnataka Industrial Areas Development Board (KIADB), • Tamil Nadu Industrial Development Corporation Ltd, • Haryana Industrial Infrastructure Development (HSIIDC)
Water & waste water		• Haryana Public Health Engineering Department (PHED) , • Chennai Metropolitan Water Supply and Sewerage Board, Tamil Nadu • Tamil Nadu Water Supply and Drainage Board (TWAD) • Maharashtra Jeevan Pradhikaran （MJP） • Karnataka Urban Water Supply and Drainage Board • Karnataka Rural Water Supply and Sanitation Agency (KRWSSA)

(Source: Prepared by Study Team)

1.6 Status of investment and financing for PPP Infrasturcture in India

1.6.1. Introduction

Infrastructure creation is a capital-intensive process, with large initial costs and typically lower operating costs. This necessitates long-term finance since the gestation period for such projects is often much longer in comparison to other projects, e.g. for a manufacturing plant. Infrastructure projects are characterised by non-recourse or limited recourse financing, that is, lenders can only be repaid from the revenues generated by the project. Thus, the market and commercial risks, including uncertainty of (traffic) demand forecasts, assume greater significance for lenders.

The Eleventh Five Year Plan (2007-08 to 2011-12) aims at sustaining the real GDP growth rate at 9 %. Towards this end, an ambitious programme of infrastructure investment, involving both public and private sector, has been sketched out for the Plan period. The investment requirement for infrastructure is estimated at US$ 514.04 billion for the Plan period. The target is to raise infrastructure investments from 5% to over 8% of GDP by 2011-12. The Eleventh Plan document outlines the infrastructure deficits in specific sectors which are to be bridged during the plan period as tabulated below. The latest projections from govenrment show that the target for infrastructure invesment over the Twelfth

Plan period is ove USD 1 trillion which translates to approximately 10% of GDP over this period.

(1) Sources of Finance

In the first three years of the 11th plan, the total financing split across various types of financial instruments are as follows:

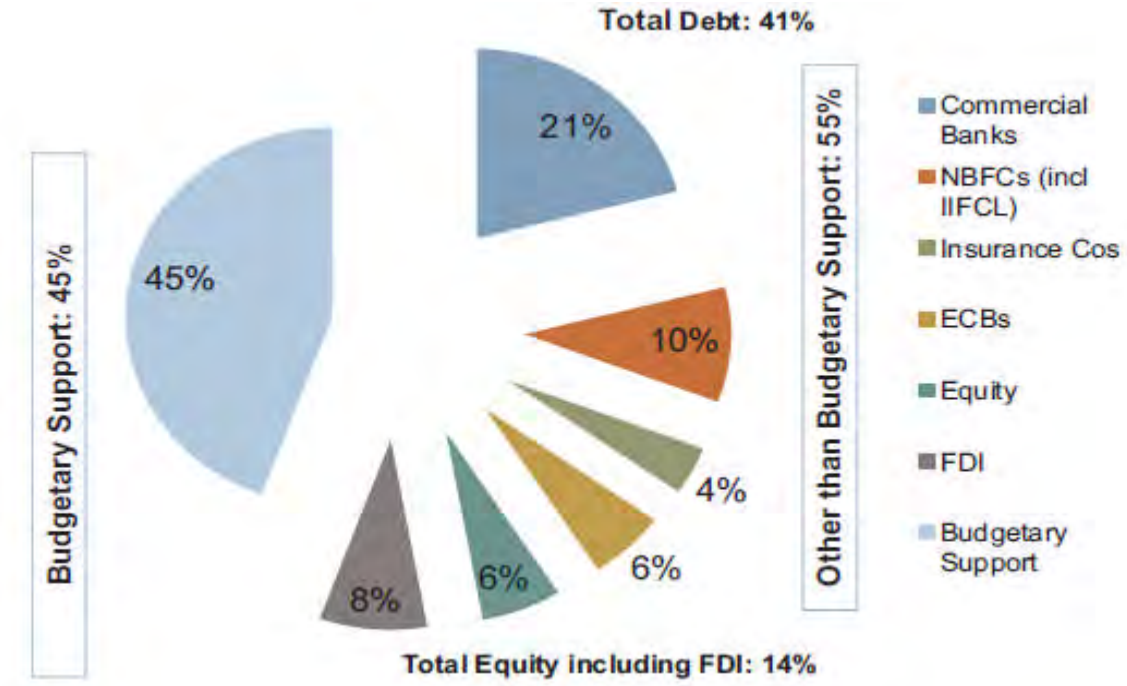

Figure 1-10 Snapshots of infrastructure financing by sources (2007-09)

(Source: Government of India)

While budgetary support remains the prime source of infrastructure financing, other modes have gained prominence in recent years owing to the government's efforts to enhance the viability of the infrastructure sectors. These include commercial banks, non-bank finance companies (NBFCs) and insurance companies. The detailed break-up of domestic and external sources is given below:

Table 1-15 General tenure of loan by financing sources

Domestic Sources	External Sources
These would typically consist of Domestic commercial banks (3-5 years) Domestic term lending institutions (7-10 years) Domestic bond markets (7-10 years) Specialized infrastructure financing institutions	These include, International commercial banks (7-10 years) Export credit agencies (7-10 years) International bond markets (10-30 years) Multilateral agencies (15-20 years) Bilateral aid agencies

(Source: prepared by Study Team)

Table 1-16 Flow of bank credit in infrastructure sector

Rs crore	2006-07	2007-08	2008-09	2009-10	Apr-Nov'09	Apr-Nov'10
Power	12,994	21,947	29,372	63,394	37,806	52,502
	43%	35%	45%	58%	57%	51%
Telecom	1,164	18,663	12,044	9,036	761	38,367
	4%	30%	19%	8%	1%	38%
Roads & Ports	5,352	9,429	12,584	26,509	18,408	8,790
	18%	15%	19%	24%	28%	9%
Other Infrastructure	10,776	12,179	10,658	10,956	8,790	2,643
	36%	20%	16%	10%	13%	3%
Total	30,287	62,219	64,659	109,896	65,766	102,303

(Source: Economic Survey 2010-11)

The growth of bank credit in infrastructure has witnessed stark variations across various sub sectors. While power sector owing to its revenue potential reported a 39% growth in the Apr-Nov'10 compared to the corresponding previous period, other sectors likeroads and ports reported a decline of 52% in Apr-Nov'10 owing to execution related issues.

1.6.2. Public Sector Institutions

Majority of the infrastructure lending in India takes place through public sector institutions. These include Public Sector Unit (PSU) banks , special infrastructure lending institutions like IDFC and IIFCL. Institutions like Infrastructure Development Finance Corporation (IDFC) and India Infrastructure Finance Company Limited (IIFCL) particularly address the issues concerning asset liability mismatched and need for providing long term financing needs of the sector.

(1) PSU Banks

Table 1-17 Snapshot of lending pattern for key Public Sector Banks

Rs. crore	Mar'10			Latest Results			
	Loan Book	Share of infrastructure	Infrastructure Lending	Loan Book	Share of infrastructure	Results as on	Infrastructure Lending
SBI	641,480	18%	115,466	739,971	21%	Dec'10	155,394
PNB	186,601	13.14%	24,520	221,252	14.6%	Mar'11	35,596
IDBI	138,202	Not Available	Not Available	157,098	26%	Mar'11	41,243

(Source: Company Annual Reports)

Major corporate lending in India takes place through PSU banks with State Bank

of India (SBI) and Punjab National Bank (PNB) being the primary lenders.

① SBI

State Bank of India, set up in 1806 is the country's largest commercial bank in terms of profits, assets, deposits, branches and employees. The bank's asset base is widely diversified across sectors and lending classes (retail, corporate, SME, international etc.). The State Bank Group, with over 16,000 branches, has the largest banking branch network in India. It also has around 130 branches overseas. SBI along with its associate banks is a regional banking behemoth and is one of the largest financial institutions in the world.

② PNB

PNB was founded in 1894 and today is the second largest state-owned commercial bank in India. The bank had a total asset base of Rs. 3, 78,325 crore as on March 2011. PNB has a widespread with 5161 branches and 5050 ATM's spread across the country.

③ IDBI

IDBI, a provider of long-term finance began as a Development Finance Institution (DFI) and played a pivotal role in developing the country's financial architecture. In September 2004, IDBI moved from its erstwhile DFI status into a full-service commercial. As on March 31, 2011, the Bank had a network of 816 Branches and 1372 ATMs. The Bank's total business, during Fy 2010-11, reached Rs. 3,37,584 crore, Balance sheet reached Rs. 2,53,377 crore while it earned a net profit of Rs. 1650 crore (up by 60 %).

(2) Infrastructure lending institutions

Table 1-18 Snapshot of lending pattern for key lending institutions

Rs crore	Loan Book		
	Mar'10	Latest Results	
IDFC	25,031.0	Mar'11	37,552.0
IIFCL	9,856.1	Sep'10	10,827.8

(Source: Company Annual Reports)

① India Infrastructure Finance Company Limited (IIFCL)

IIFCL was incorporated on January 5, 2006 with an aim to lend funds for longer-term maturity, both directly to the eligible projects and through refinancing to banks and financial institutions to supplement their resources for infrastructure financing.

It has the following schemes:

- **Scheme for financing Viable Infrastructure Projects:** The IIFCL shall finance only commercially viable projects and will give priority to PPP projects implemented by private sector companies selected through a competitive process. Its lending to other private sector companies (other than PPP) cannot be more than 20% of lending in any accounting year. Further, IIFCL will not carryout its appraisal but will depend on the appraisal done by the Lead Bank.
- **IIFCL's refinance scheme:** The primary objective of IIFCL's refinance scheme is to facilitate the flow of funds in an increasing manner for the development of infrastructure in the country. Under the scheme, IIFCL will provide refinance for term loans sanctioned by Banks and Public Financial Institutions for only new commercially viable projects in road, port, Railways Sectors, Competitively bid power projects, and UMPPs.
- **Takeout Finance Scheme:** The objectives of this scheme are to boost the availability of longer tenor debt finance for infrastructure projects, to address sectoral / group / entity exposure issues and asset-liability mismatch concerns of lenders, to provide debt financing to infrastructure projects, and to expand sources of finance for infrastructure projects by facilitating participation of new entities i.e. medium / small sized banks, insurance companies and pension funds. IIFCL would provide takeout financing to individual Lender(s) to the extent of 75% of the residual amount of the loan on the Scheduled Date of Occurrence of Takeout. Under this scheme, IIFCL, the identified Lender(s) and the Borrower shall enter into a tripartite agreement i.e. Takeout Agreement pursuant to the Takeout Finance Scheme.

Table 1-19 Sector Wise Sanctions as on December 31, 2010

Rs crore	No. of Projects	Project Cost	Gross Sanctions
Road	97	95,734	13,318
Port	7	5,234	860
Airport	2	14,716	2,150
Power	28	123,876	12,976
Urban Infrastructure	3	12,767	704
Pooled Municipal Debt Obligation	31	4,642	119
Total	**168**	**2,56,969**	**30,127**

(Source: PPP India Website)

The states with most number of sanctions are Maharashtra, Andhra Pradesh, Tamil Nadu, Gujarat.

② Infrastructure Development Finance Company (IDFC)

IDFC was incorporated on January 30, 1997 in Chennai to as a specialized financial intermediary for infrastructure in the country. Since the day of its inception, IDFC has been providing funding to numerous projects in energy, electricity, oil and gas and other infrastructure sectors. IDFC in partnership with Feedback Ventures has created India Infrastructure Initiative that would identify infrastructure development projects across the country and promote PPP for building infrastructure.

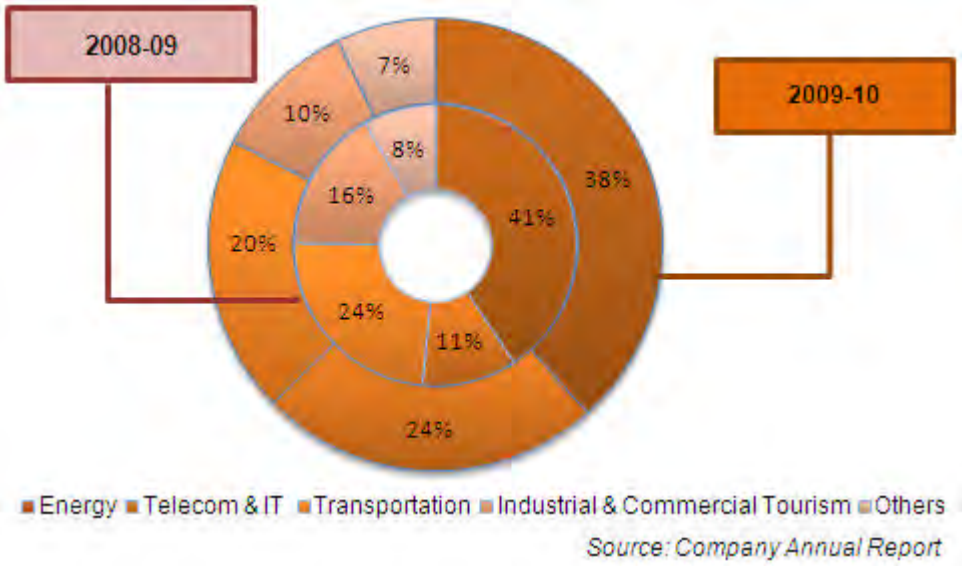

Figure 1-11 Sector Wise Break up of the portfolio
(Source: Company Annual Report)

IDFC's project finance business concentrates on four infrastructure sectors — Energy; Transportation; Telecom & IT and Industrial, Commercial & Tourism. In 2009-10,the share of energy declined to 38.3% from 40.6% in 2008-09 however it still comprises the largest loan book exposure. The share of Telecom and IT has increased significantly from 10.9% in 2008-09 to 24.4% in 2009-10, making it the second largest sector. This is followed by Transportation, whose share has also dropped from 23.8% in 2008-09 to 19.8% in 2009-10. While that of Industrial, Commercial and Tourism has reduced from 16.4% in 2008-09 to 10.4% in 2009-10. The share of 'Others', which include new plays in steel and cement, has decreased. For good reason, with improvements in the business environment, IDFC has refocused in financing its core infrastructure segments.

- Energy
  - India continues to have a huge power supply demand deficit, and the Government of India is actively pushing power projects using the Private Public Partnership (PPP) route. Of late, the government has accelerated its

efforts in large scale power projects, which offers larger opportunities for financing for companies like IDFC. On the power generation front, while thermal power remains the dominant area, IDFC also has been pursuing hydro-electric projects. Renewable energy generation is another area where the Company has been actively partnering players in the wind energy space.

- Transportation

  – In transportation, IDFC works on the financing of roads, civil aviation, airports, ports, container terminals, and gas and oil pipelines. With a vision that focuses on national highway development at the rate of 20 kms a day instead of the close to 5 kms being developed per day as of now, a large number of projects are in the pipeline. There is also a paradigm shift away from awarding small packages covering short road sections to longer stretches, with significantly larger package sizes.

- Telecommunications & IT

  – While telecommunication in today's India is fairly mature, comprising some very large players who have strong balance sheets, there is opportunity in financing the new entrants that were awarded licenses in 2007-08 and are poised for accelerated pan-India growth.

- Commercial, industrial infrastructure tourism and others

  – Given the uncertainties in the real estate sector— primarily commercial real estate — IDFC has been cautious in this segment. However, in a calibrated manner, and based on the past record of various promoters, the Company continues to invest in this space.

(Source: Company Annual Report)

③ Infrastructure Leasing & Financial Services Limited (IL&FS)

IL&FS is one of India's leading infrastructure development and finance companies. The company was promoted by the Central Bank of India (CBI), Housing Development Finance Corporation Limited (HDFC) and Unit Trust of India (UTI). Over the years, IL&FS has broad-based its shareholding and inducted Institutional shareholders including State Bank of India, Life Insurance Corporation of India, ORIX Corporation - Japan and Abu Dhabi Investment Authority. IL&FS has a distinct mandate catalysing the development of infrastructure in the country. The organisation has focussed on the commercialisation and development of infrastructure projects and creation of

value added financial services

(3) Sector Specific NBFC's

Table 1-20 Snapshot of lending pattern for key NBFCs

Rs crore	Mar'10	Latest Results	
PFC	79,855.8	Mar'11	99,570.7
REC	65,979.0	Dec'10	75,744.0
IRFC	38392.3		

(Source: Company Annual Reports)

There are certain specific NBFC's that provide sector specific infrastructure financing. These include Rural Electrification Corporation (REC) and Power Finance Corporation (PFC) to finance power projects and India Rail Finance Corporation (IRFC) for Railways.

① Rural Electrification Corporation (REC):

The main objective of the Rural Electrification Corporation is to finance and promote rural electrification projects all over the country. Incorporated in 1969 and currently, a listed entity with a net worth of Rs 11,080 crores, REC commenced its operations primarily for financing rural electrification in India. REC's mandate evolved further in line with the development priorities of the Government and today, it is a strategic player in the financing of the entire Power Infrastructure space, which includes financing for Generation, Transmission, Distribution and rural electrification projects across the country. However, it still continues to play an integral role in implementing the rural electrification strategy and is appointed to act as the nodal agency for the objective.

② Power Finance Corporation (PFC)

The Power Finance Corporation (PFC) was established in July 1986 primarily to service the growing demands of the power sector and provides loans specifically to this sector. The state's reliance on PFC for debt is mainly due to the competitive rates along with liberal terms and conditions offered by it. Over the last few years, along with the REC, it has been mandated by the Govt. of India to facilitate private sector participation in independent inter-state power transmission projects in its role as a bid process co-ordinator by selecting private developers on a competitive basis. In addition to this, PFC has been the implementing agency for the Govt. of India's ambititous Ultra Mega Power Project

- Schemes:

– **Consortium Lending** - PFC, in association with LIC and four other Indian Banks had established a Power Lenders' Club (PLC) to provide single window financing solutions for clients in the private power sector and to achieve expeditious financial closure. Subsequently, with the joining of HUDCO and eight other Indian Banks, PLC has now emerged as a 21 members strong Club. The Consortium approach offered by Club would provide a comprehensive solution to the debt requirements of these projects without the developer having to queue up before a no. of lenders to arrange for the funds.

– **Financing of Renewable Energy Generation Projects and facilitation for CDM benefits** - PFC has established a Renewable Energy and CDM group to focus and accelerate the development of business in Renewable Energy Generation Projects. PFC has a very ambitious target of financing such projects during the current financial year. PFC takes higher exposure in Renewable Energy Generation Projects and offer special interest rates for such projects.

③ Indian Rail Finance Corporation Ltd. (IRFC)

IRFC is a dedicated financing arm of the Ministry of Railways. Its sole objective is to raise money from the market to part finance the plan outlay of Indian Railways. The money so made available is used for acquisition of rolling stock assets and for meeting other developmental needs of the Indian Railways. The borrowing programme of IRFC is guided by the requirements projected by Ministry of Railways.

1.6.3. Private Sector Institutions

(1) Private Sector Banks

Table 1-21 Snapshot of lending pattern for key Private Sector Banks

Rs crore	Mar'10			Latest Results			
	Loan Book	Share of infrastructure	Infrastructure Lending	Loan Book	Share of infrastructure	Results as on	Infrastructure Lending
ICICI Bank	187,314	8.6%	16,043	216,366	NA	Mar'11	NA
Axis Bank	104,343	13.35%	16,043	1,42,408	13.8%	Mar'11	19,667

(Source: Company Annual Reports)

① ICICI Bank

ICICI Bank, which began operations under the name of Industrial Credit and Investment Corporation of India, as a project finance institution is today India's second-largest bank with a total asset base of Rs. 4062.34 billion at March 31, 2011 and profit after tax Rs. 51.51 billion for the year ended March 31, 2011. The Bank has a network of 2,529 branches and 6,102 ATMs in India, and has a presence in 19 countries, including India. Owing to its roots, the company has a stronghold on the private infrastructure lending space in India.

② Axis Bank

Axis Bank was set up in 1994 under the name of UTI bank. Currently, the bank is one of the largest private sector banks in the country with a capitalization of Rs. 410.54 crore as on March 2011. Axis Bank is one of the leading players in infrastructure financing and debt syndication space having syndicated an aggregate amount of Rs. 27,000 crores by way of Rupee and Foreign currency loans during 2009-10.

(2) NBFC's

Other such specialised Non-Banking Finance Companies (NBFCs) that have been set-up are Infrastructure Finance Corporation of India, SREI Infrastructure and L&T Infra Finance, Housing & Urban Development Corporation (HUDCO).

(3) External Commercial Borrowings (ECBs)

External Commercial Borrowings (ECBs) have become a useful source of debt for infrastructure projects. In first three years of the 11th Plan, about 10% of the total financing requirement came from ECB. There have been several relaxations in ECB guidelines in the recent times, which are useful for infrastructure project. For example, companies are now allowed to raise ECBs to replace domestic debt. Further, Infrastructure Finance Companies (IFCs) can also raise ECBs up to 50% of own funds through the automatic route.

(4) Private Equity Funds

The need for a Private Equity (PE) market in India has grown on the back of relatively high borrowing rates in the country. Further, in context of the infrastructure sector, the debt market often holds concerns with regards to the infrastructure sector because of delays in project execution and long payback periods in a thinly regulated sector. Energy, with a total investment of USD 5254.4 mn between the period from 2005 to May 2011 has been the largest investment drawer over the years, followed by telecom with an investment of

USD 4836.7 mn, engineering & construction with an investment of USD 3375.8 mn and shipping, logistics with an investment of USD 1810.1 mn and travel & transport (aviation) with an investment of USD 575.9 mn.

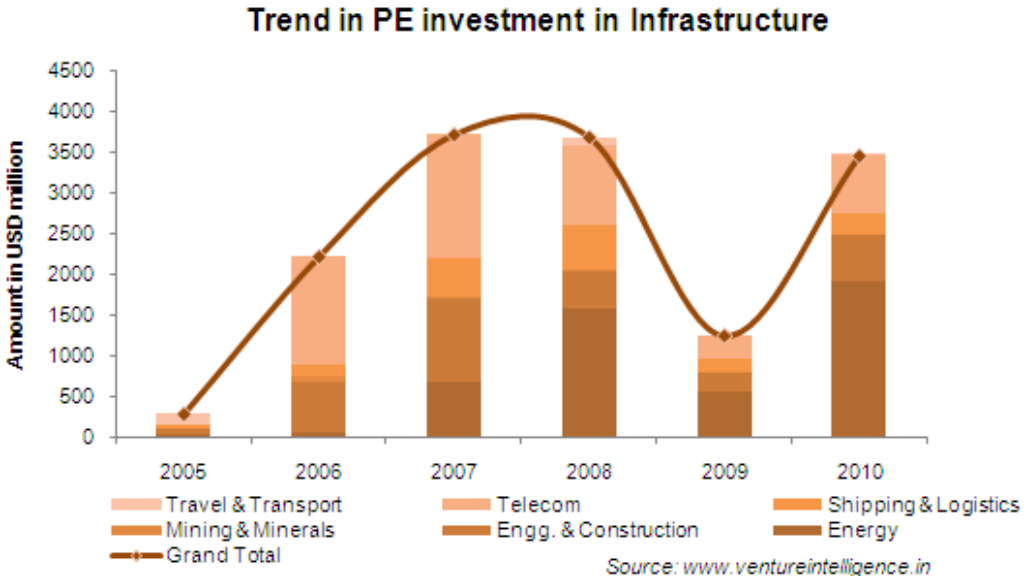

Figure 1-12 Trend in PE investment in Infrastructure

(Source: www.venture intelligence.in)

Table 1-22 Major Investment Sub sectors

(Investment between 2005 and May 2011) in USD mn:

Energy		Engineering & Construction		Shipping & Logistics	
Sector	**Amount**	**Sector**	**Amount**	**Sector**	**Amount**
Gas	210.3	Infrastructure Services	917.8	Logistics	521.7
Oil&Gas	366.1	Infrastructure (Roads)	865.2	Port	487.5
Power	2992.1	EPC	392.9	Container freight/terminal	165.2
Renewable Energy	1532.53	Water & Sanitation	108.44	Rail	104.0
Thermal Power	141.3	Railway	39	Shipping/Shipyard	259.7
				Warehousing	179.0

(Source: www.ventureintelligence.in)

Both conventional and renewable energy have sought huge inflows from the PE market, with investment flow way above other infrastructure sectors. More lucrative sectors like roads and infrastructure services have garnered good

investments while closed and socially sensitive sectors like rail and water have been placed lower on the list. Logistics has been another prominent area attracting private equity investment.

As they capitalize on the expanding opportunities, PE investors are using a variety of investment approaches. Most take the form of standalone investments across several companies and developers, but some significant deals saw PE firms' partner with companies to form joint ventures. For example, PE fund Actis joined forces with Tata Realty and Infrastructure Ltd last year to invest $2 billion in road projects. Others have pursued a blended model, such as IDFC Project Equity's investments in several special-purpose vehicles (SPVs) that are structured to help PE investors to become majority owners. Another indicator of strong PE interest in the sector has been the increase in average deal size, with the share of equity investments exceeding $100 million.

Table 1-23 Foreign investors driving the fund flow- Period: 2005 to May 2011:

USD mn	Co-Investment	Foreign	India-dedicated	Unknown	Total
Energy	1,664.9	2,582.1	1,007.5		5,254.4
Engg. & Construction	317.6	1,556.6	1,461.6	40.0	3,375.8
Mining & Minerals		81.8	35.5		117.3
Shipping & Logistics	184.2	880.7	745.2		1,810.1
Telecom	2,828.0	1,534.3	474.4		4,836.7
Travel & Transport	190.0	176.0	209.9		575.9
Total	5,184.7	6,811.3	3,934.1	40.0	15,970.2

(Source: www.ventureintelligence.in)

Majority of the investments have come from foreign participants including the likes of ifc, Citi, Temasek and 3i among others. The Indian funds active in the market include IDFC Project Equity,ICICI Ventures, IFCI Ventures, Motilal Oswal and HDFC Venture among others. Delhi with a total investment of around USD 4015 Mn in the stated period has been the largest beneficiary of PE investment followed by Mumbai with USD 4000 Mn and Hyderabad with USD 2342 Mn.

(5) Way Forward

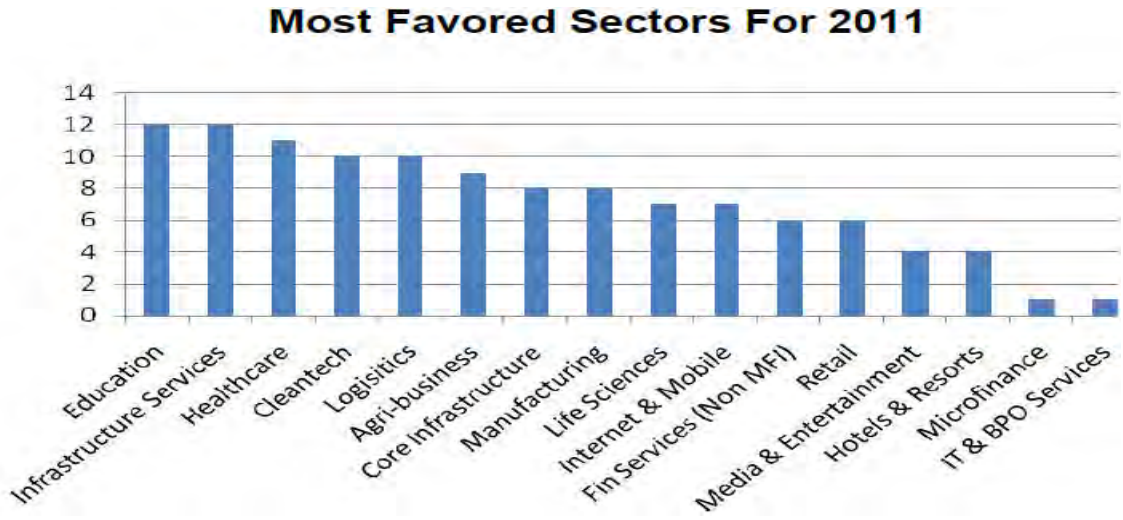

Figure 1-13 Most Fovored Sectors for 2011

(Source: Venture Intelligence India Roundup Report 2010)

As per the Venture Intelligence India Roundup Report, investors ranked Education and Infrastructure Services companies, apart from those in Healthcare, Cleantech and Logistics, as among the favoured sectors for investments in 2011. Agri-business, Core Infrastructure and Manufacturing also scored high in the survey. Consequently, infrastructure is expected to remain one of the focus areas for PE investors.

1.7 Cases of Feed-in Tariff and effectiveness in India

Feed-in tariff is a policy mechanism designed to encourage the adoption of renewable energy sources and to help accelerate the move toward grid parity. FiTs in Indian context include three key provisions

- Guaranteed grid access
- Long-term contracts for the electricity produced
- Purchase prices that are methodologically based on the cost of renewable energy generation and tend towards grid parity

With the advent of feed-in-tariff methodology in Indian renewable energy scenario, eligible renewable electricity generators (which can include homeowners and businesses) are paid a premium price for any renewable electricity they produce. Typically regional or national electric grid utilities are obligated to take the electricity and pay them. FITs are effective at overcoming the various barriers that confront market entry for renewable, which can be summarized as follows:

- **Costs and pricing**: distorted 'playing field' through subsidies for competing energy sources; fluctuation of oil and gas prices; high initial capital costs; environmental externalities
- **Legal and regulatory**: lack of legal framework for independent power producers; planning restrictions; grid access; liability insurance requirements
- **Market performance**: lack of access to credit; perceived technology performance uncertainty and risk; lack of technical or commercial skills and information

Well designed and implemented FITs in India can also:

- Support installations of different sizes and technologies: in addition to large RE projects for wind, solar, biomass etc, householders can now get a guaranteed pay-back on a solar roof in just a few years, rather than 20–30 years
- Promote innovation: annual reduction of tariffs for new installations drives technological efficiency
- Drive economies of scale: investment and demand are rising, and manufacturing expansion is taking place globally in response, lowering cost further over time.

Promulgation of Feed in tariffs for renewable energy technologies in India started when essence for the promoting renewable technologies was felt owing to the dwindling of the fossil fuel resources and imminent threat of climate change looming large on the country.

Central Electricity Regulatory Commission (CERC) announced on September 17, 2009, new regulations launching a system of feed-in tariffs for renewable energy, including both wind and solar energy. CERC's release of the feed-in tariff regulations were in response to the National Action Plan on Climate Change. The action plan calls for five percent of electricity generation in India to be from renewable sources by 2010 and to increase one percent per year for the next ten years. Yet, the move by CERC on feed-in tariffs strengthens India's position in the run up to the climate change negotiations in Copenhagen. CERC's regulations are a merely a primer on how to calculate tariffs for each technology. The new regulations spell out what assumptions need to be made to calculate the tariffs.

Electricity Act, 2003 mandates and empowers the State Electricity Regulatory Commission(SERC) to promote renewable energy and specify, for purchase of electricity from renewable energy sources, a percentage of the total consumption

of electricity in the area of a distribution licensee. This is considered a major boost for promotion of the renewable energy sector in India. All major States have announced feed-in-tariff for renewable power and the recent growth of renewable power is attributed to stable regulatory policy framework. They have also announced Renewable Portfolio Standards varying from 1 percent to 10 percent for reasonable periods. Renewable Purchase Obligation specifies in the minimum percentage of the green power that needs to be procured by the obligated entities in the state at the Feed in Tariff rates specified by respective SERC's.

In continuation with the above mentioned RE initiatives and interventions and also with regards to present context, an attempt has been made to analyze the effect of the feed-in-tariff of various renewable energy technologies and renewable energy sector of India, per se.

Table 1-24 Case in Feed-in-Tariff in advance states

Technology	State	Potential in State	Feed-in-Tariff	Tariff whether High or low	Installed Capacity of the technology (MW)
Solar	Gujarat	High	12 & 5-Solar PV 11 &4-Solar Thermal	High	Projects installing 716MW has been sanctioned
SHP	Himachal Pradesh	High (2267MW)	2.87	Low	375
Wind	Haryana	Low	4.08	High	No project has been sanctioned

(Source: prepared by Study Team referring each state websites)

The above consolidated table attempts to figure out the effect of the feed-in-tariff on the installed capacity of any RE technology in some of the identified states. It can be analysed from the aforementioned table that states like Gujarat, which have higher potential for solar energy and thereby have announced a higher preferential tariff for the same, have attracted large number of prospective developers and henceforth been able to increase the renewable energy generation base.

On the other hand, there are states like Himachal Pradesh which have a higher potential for a specific RE technology but have not been able to attract huge capacity addition since the feed in tariff in the state for the technology seems to be on the lower side and hence unattractive. Contrary to aforementioned scenario, there are states like Haryana which have introduced in a higher feed-in-tariff for wind energy irrespective of the fact that the resource potential for the same in the state is not encouraging.

Therefore, it can be summed up by stating that feed in tariffs of the states in

accordance to the potential for any particular RE technology does follow a discreet trend. The designing of the Feed-in-tariffs for any RE technology needs to be judiciously contemplated which can thereby justify the promotion of the RE technology.

In the 5 states, Maharashtra, Karnataka, Tamil Nadu, Gujarat, and Haryana, the comparable status of feed-in tarrif systems are as follows.

Table 1-25 Snapshots of Feed-in Tariff in 5 target states by sources

State	Tariff (Rs./kWh)					
	Wind	SHP	Biomass	Cogen	Solar PV	Solar Thermal
Maharashtra	3.50, esc @ 15p for 13 years	2.84, esc @3p/year till 10th year	4.98	4.79	17.91	15.31
Karnataka	3.70	3.40	3.66-4.13 (year 1-10)	3.59-4.14 (year 1-10)	14.50	11.35
Tamil Nadu	3.39	3.35	Fixed cost :1.833-1.435 Var.Cost: FY 10- 2.667 FY 11- 2.8 FY 12- 2.94	Fixed cost :2.52 – 1.94 Var.Cost: FY 10- 1.856 FY 11- 1.948	15.15	13.15
Gujarat	3.56	3.29 for FY 08 esc @ 3%	4.40 (1-10 years) 4.75 (11-20 years)	4.55 (1-10 years) 4.90 (11-20 years)	15 (1-12 years) 5 (13-25 years)	11(1-12 years) 4(13-25 years)
Haryana	4.08 for FY 08 and esc. @1.5%	3.67 for FY 08 and esc. @1.5%	4.84 (FY 10) with escalation of 2%	3.74 (FY 08) with escalation of 2%	15.16 (applicable till FY 13)	

(Source: prepared by Study Team referring each state websites)

Chapter 2 Current status of foreign direct investment into PPP Infrastructure in India

2.1 FDI inflow to Infrastructure

2.1.1. Overview of FDI to India

It is observed that the government incentive schemes have not only aided private participation as evident from the results mentioned above but has been instrumental in catalyzing foreign investment in the Indian infrastructure space. The cumulative amount of FDI equity inflows from April 2000 to February 2011 stood at US$ 128.6 billion, according to the data released by the Department of Industrial Policy and Promotion (DIPP). India is ranked as the 4th most attractive foreign direct investment (FDI) destination in 2010. The top investing countries are Mauritius, Singapore, U.S.A., and U.K.and Netherlands and Japan ranks 6th. However, FDI inflows (in absolute levels) from Japan have been steadily increasing over past three years, unlike the top investors (except Netherlands). Currently, her share in total FDI inflows is 4%.

2.1.2. FDI by Infrastructure sectors

Table 2-1 below provides the FDI inflows to Infrastructure.

Table 2-1 FDI inflows to Infrastructure (US$ million)

Sector	2007-08	2008-09	2009-10	April-Nov.-2009	April-Nov.-2010
Power	968	984.8	1,437.3	1237.8	984.0
Non-conventional Energy	43.2	85.3	497.9	67.0	44.1
Petroleum & Natural gas	1426.8	412.3	272.1	218.7	529.4
Telecommunications	1261.5	2558.4	2554.0	2223.3	1092.8
Information & Broadcasting *	299.2	748.7	491.2	419.9	272.4
Air Transport **	99.1	35.2	22.6	15.7	115.6
Sea Transport	128.4	50.2	284.9	279.8	288.6
Ports	918.2	493.2	65.4	65.4	10.9
Railway-related Components	12.4	18	34.2	25.1	0.4
Total (of above)	**5156.8**	**5386.1**	**5659.6**	**4552.7**	**3338.2**

Source: Department of Industrial Policy & Promotion.

Notes: * Information & broadcasting including print media;

** Air transport including air freight.Variation in data is due to reclassification of some sectors.

(Source: Economic survey 2011 Information till Nov 2010)

The sector attracting highest FDI inflow is services sector.

- **Roads and Highways**-The amount of FDI inflows (from Jan'00 –Dec'09) in roads and highways have been US$ 1,297.4 million (5,564.5 crore) which is about 1.22% of total FDI inflows
- **Power (including renewable energy)**-The cumulative inflows (from April'00- Feb'11) in Power sector have been US$ 5,884 million (26,642

crore) which is about 5% of total FDI inflows. The inflows for the financial year 2010-2011 have been 1237 million US$ (5639 crore)

– **SEZ**-The total FDI received by SEZs in 2007-08 comprises about 8 per cent of the total FDI inflows into the country.(NCAER Report 2009)

2.1.3. FDI by states

The state-wise trends in FDI show that Maharashtra, New Delhi, Karnataka, Tamil Nadu and Gujarat have been the largest recipients of FDI in terms of cumulative FDI inflows from April 2000 to February 2011. These states are either known for their strong industrial base (like Gujarat) or as software hubs (like Karnataka and Delhi). This could also be attributed to their better resources, infrastructure like roads and power, investor-friendly policies like single-window clearances and investment promotion schemes like special economic zones.

2.2 Legislative framework for foreign direct investment into PPP Infrastructure in India

2.2.1. Business Structure

The business structure of a foreign operating entity is a function of the prevailing legal and tax regime in the target country. The possible structures could include presence through liason offices, branches or corporate entity. Again, the equity contribution of the foreign player would be determined by the level of FDI permissible in the target segment. Most of the foreign players wanting to invest in India infrastructure space opt for the corporate entity route, which allows them to undertake commercial activity in the said space. Majority of these initiatives are undertaken through the Special Purpose Vehicle (SPV) route so as to allow the parent company to protect itself from possible adversities of a concession business, the business structure. Separate SPV projects are then held by the parent company or its subsidiary in a holding company structure.

2.2.2. Prospective entry modes for a foreign company in India:

(1) Operating as an Indian Company

① Wholly-Owned Subsidiary Company

A foreign company can set up a wholly owned subsidiary company in India to carry out its activities. Such a subsidiary is treated as an Indian resident and an Indian company for all Indian regulations (including Income Tax, Foreign Exchange Management Act,1999 and the Companies Act), despite being 100% foreign-owned. At least two members, for a private limited company, and seven members, for a public limited company, are mandatory.

② Joint Venture with an Indian Partner

Although a wholly owned subsidiary has proved to be the preferred option,

foreign companies have also begun operations in India by forging strategic alliances with Indian partners. The trend is to choose a partner who is in the same field/area of activity or who brings synergy to the foreign investor's plans for India. Sometimes joint ventures are also necessitated due to restrictions on foreign ownership in certain sectors. Sectors / activities with sectoral caps for FDI are defined in in FDI policy issued by Department of Industrial Policy & Promotion, Ministry of Commerce & Industry, Government of India

(Source: http://dipp.nic.in/Fdi_Circular/FDI_Circular_012011_31 March2011.pdf)

③ Limited Liability Partnership (LLP)

LLP is a new form of business structure in India. It combines the advantages of company and partnership in a single organisation. The partners of the LLP have limited liability and they can infuse funds in the LLP in the form of contribution. LLP is comparatively easier to manage with less compliance levels as compared to a company form of organisation. In 2010, the Government of India had allowed foreign investors to pick up stakes in LLPs through the 100% automatic FDI approval route but the proposal did not take effect as the RBI did not notify the rules under the Foreign Exchange Management Act. The lack of coordination between the policy-making and policy-implementing bodies has led to uncertainty for overseas investors and FDIs through LLP have been limited yet.

(2) Operating as a Foreign Company

① Liaison Office

Setting up a Liaison or Representative Office is a common practice for foreign companies seeking to enter the Indian market. The role of such offices is limited to collecting information about the possible market and to providing information about the company and its products to prospective Indian customers. Such offices act as listening and transmission posts and provides a two-way information flow between the foreign company and the Indian customers. A Liaison Office is not allowed to undertake any business activities other than liaison activities in India and cannot, therefore, earn any income in India, under the terms of approval granted by the RBI.

② Project Office

Foreign companies planning to execute specific projects in India can set up temporary project/site offices in India for this purpose. The RBI has granted general permission to a foreign entity for setting up a project office in India, subject to the fulfilment of certain conditions. The foreign entity needs only to provide a report to the jurisdictional Regional Office of the RBI giving the particulars of the project/contract.

③ Branch Office

Foreign companies engaged in manufacturing and trading activities abroad can set up Branch Offices in India for the following purposes, with the prior approval of RBI:

- Export/import of goods;
- Rendering professional or consultancy services;
- Carrying out research work in which the parent company is engaged that promotes technical or financial collaborations between Indian companies and a parent or overseas group company;
- Representing the parent company in India and acting as a buying/selling agent in India;
- Rendering services in information technology and development of software in India;
- Rendering technical support for the products supplied by parent/group companies
- Acting as a foreign airline/shipping company.

In general, manufacturing activity cannot be undertaken through a Branch Office. However, foreign companies can establish a Branch Office/unit for manufacturing in a SEZ subject to the fulfilment of certain conditions. Citizens of specified countries are prohibited from establishing a project office or any other place of business in India without the prior permission of the RBI.

2.2.3. Factors affecting choice of business structure and level of equity investment

(1) FDI Regulations

Foreign direct investment is freely allowed in all sectors including the services sector, except where the existing and notified sectoral policy does not permit FDI beyond a ceiling. FDI for virtually all items/activities can be brought in through the automatic route under powers delegated to the Reserve Bank of India (RBI), and for the remaining items/activities through Government Approval

Automatic Route - No prior Government approval is required if the investment to be made falls within the sectoral caps specified for the listed activities. Only filings have to be made by the Indian company with the concerned regional office of the RBI within 30 days of receipt of remittance and within 30 days of issuance of shares

FIPB Route - Investment proposals falling outside the automatic route would require prior Government approval. Foreign Investment requiring Government approvals are considered and approved by the Foreign Investment Promotion Board ("FIPB"). Decision of the FIPB is usually conveyed in 4-6 weeks. The

recommendations of the FIPB with respect to the proposals under the ambit of the non automatic route, involving an investment of to INR 1200crore or less are considered and approved by the Finance Minister. Projects with an investment that is greater than this value are submitted by the FIPB to the cabinet committee on economic affairs for further approval. Thereafter, filings have to be made by the Indian company with the concerned Regional Offices of the RBI within 30 days after issue of shares to the foreign investors.

Figure 2-1 below outlines the permissible foreign direct investment limit across select infrastructure sectors in India. Permissible limits are defined in FDI policy issued by Department of Industrial Policy & Promotion, Ministry of Commerce & Industry, Government of India

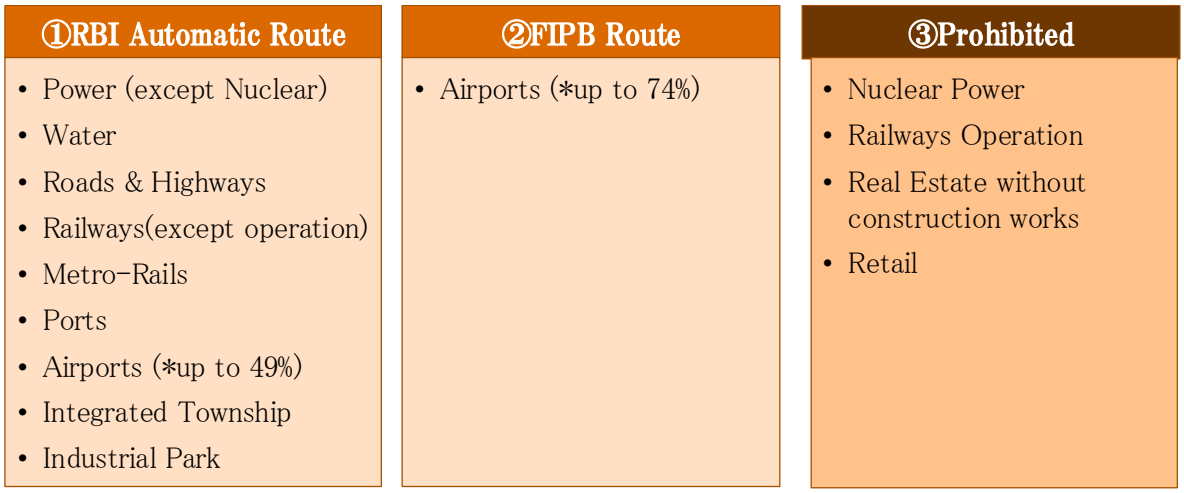

Figure 2-1 Outlines the permissible foreign direct investment limit across each sector

(Source: PwC Report on Destination India- Overview of tax & regulatory framework in India)

FDI is prohibited in the following activities/sectors:

- Retail Trading (except single brand product retailing)
- Lottery Business including Government /private lottery, online lotteries etc.
- Gambling and Betting including casinos etc.
- Business of chit fund
- Nidhi company
- Trading in Transferable Development Rights (TDRs)
- Real Estate Business or Construction of Farm Houses
- Manufacturing of Cigars, cheroots, cigarillos and cigarettes, of tobacco or of tobacco substitutes

– Activities / sectors not opened to private sector investment including Atomic Energy and Railway Transport (other than Mass Rapid Transport Systems).

Besides foreign investment in any form, foreign technology collaboration in any form including licensing for franchise, trademark, brand name, management contract is also completely prohibited for Lottery Business and Gambling and Betting activities.

(2) International tax considerations

It is vital for a company to give due weightage to the tax considerations in the target country so as to attain the desired returns. It is therefore particularly important that international investment opportunities are structured appropriately to take into consideration tax, accounting, regulatory and legal aspects. A few of these considerations are listed below:

① Entry and exit strategy

Holding company location – Appropriate planning in respect of a holding company jurisdiction is necessary to minimise Indian withholding tax and Indian capital gains on the sale of shares in Indian companies.

② Holding the investment

Permanent Establishments – One of the risks with managing investments in India is managing the Indian permanent establishment position, where if the Indian tax authorities successfully argue that there is an Indian permanent establishment of the foreign operations in India, then there maybe significant adverse tax implications. It is therefore important to carefully manage the operations carried out at the Indian level. In practical terms in the Engineering and Construction (E&C) industry, activities generally take a long duration to complete, and hence PE clauses (especially fixed base and service PE) come into play in this industry more often.

Table 2-2 Details common types of PEs and their considerations

Type of PE	Occurs when a foreign company	Issues to consider
Fixed Base PE	Has a virtual presence in India, either by way of a branch office or any other manner which depicts a virtual presence in India.	Implications should be known prior to establishing office in India
Agency PE	Has a dependent agent in India	Ensuring that an Indian company does not act as a dependent agent for the foreign company
Service PE	Renders services in India through its employees or personnel for a period aggregating more than a specific period in any twelve month period, although this depends on the specific terms of each tax treaty	Planning of international assignments to ensure that employees do not stay in India for a period exceeding the specified period

(Source: PwC Report on E&C sector)

(3) Indirect tax issues

The majority of the E&C services rendered by a company in India are subject to either service tax, VAT, or both, depending on whether the services rendered by E&C companies are in the nature of a construction contract or service contract. There are certain other indirect tax issues which need to be addressed appropriately, especially relating to contract structuring. Companies need to ensure that indirect taxes are taken into account as they make decisions around how to structure a particular project.

2.3 Implementation status of foreign direct investment into PPP Infrastructure in India

2.3.1. Implementation Status of foreign direct investment into PPP Infrastructure

(1) Outlook of foreign involvment into Indian PPP Infrastructure

① Foreign participation in all infrastructure sectors

This section provides quantitative information and analysis about PPP Infrastructure market in India based on "PPP India Database" issued by Government of India. Although the database is not necessarily exhaustive and the most updated information, it shows the trend in implementation status of foreign involvement into Indian PPP Infrastructure. *[The deficiency of the database is under review by the study team.]*

As of June 2011, the database has 316 of executed PPP projects of infrastructure PPPs (Energy, Roads, Railways, Ports, Airports, or Urban Development). However, there are only 34 foreign-involved PPP Infrastrcture projects[11] in 648[12] of PPP Infrastructure projects as Figure 2-2. In the end of 1990s, some foreign-involved PPP projects occurred mainly in Ports sector, such as NSICT (Nhava Sheva International Container Terminal), Pipava Port, and Chennai Container Terminal, while the presence of foreign-involved projects has been continuously decreasing.

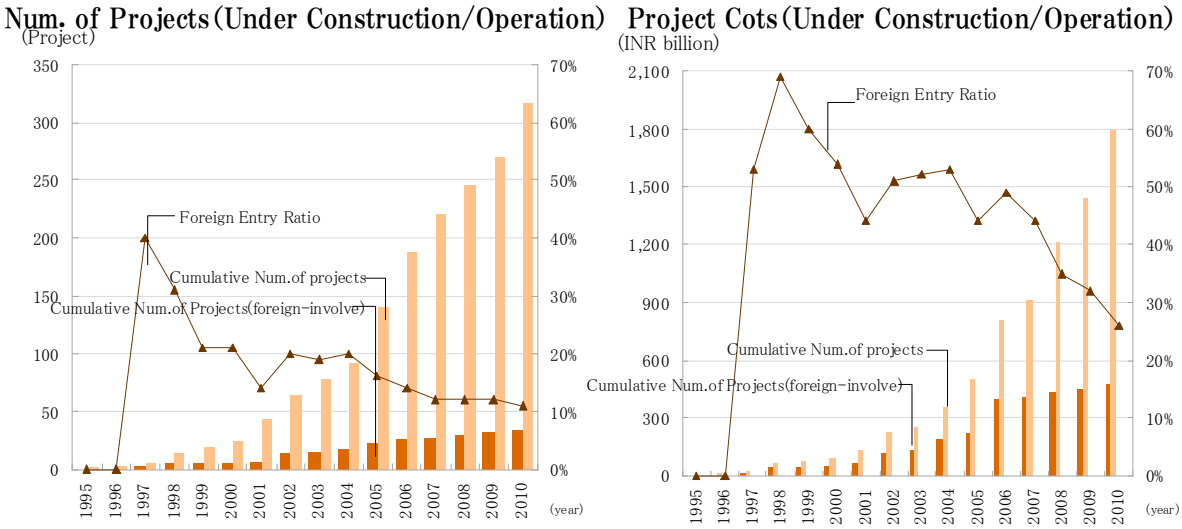

Figure 2-2 Outlook of foreign participation into Indian PPP Infrastructure by contact sign year

(Source: PPP India Database)

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[11] "Foreign-involved project" is defined as the project involving foreign company as developer, operator or investor.
[12] The samples are projects with the information about "Projects Status." Projects with "Project Status" as "Reversion to the public", "Cancelled", or blank are omitted, considering data comparavility with foreign-involved projects.

② Foreign direct investment in all infrastructure sectors

Additionally, among those —projects invested by foreign companies, the equity investment of foreign companies and investors are limited. Figure 2-3 indicates the percentage of cumulative values of equity held by foreign companies in their participating projects[13] (virtually equivalent to the average of foreign equity ratio).

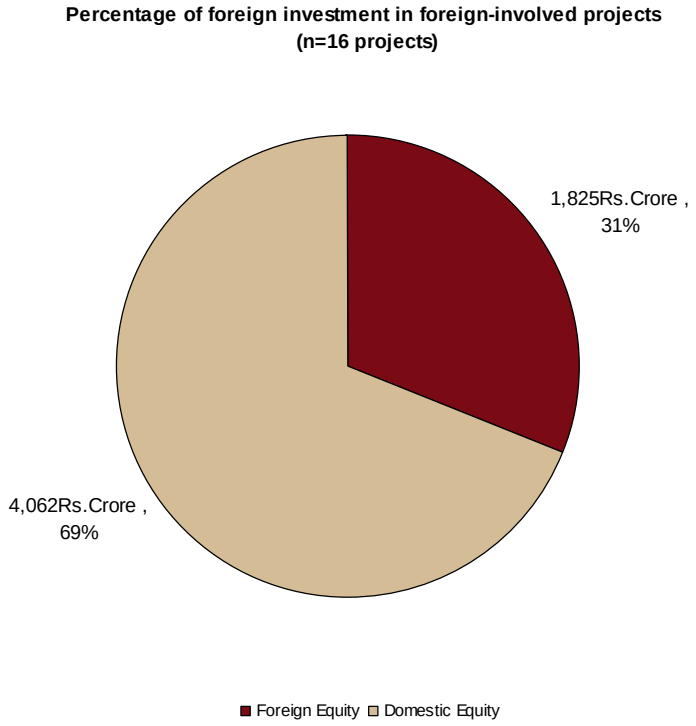

Figure 2-3 Outlook of foreign direct investment in Indian PPP Infrastructure
Source: PPP India Database

(2) Status of foreign involvement by sectors

① Foreign participation by sectors

As Figure 2-4 indicates, foreign companies participates most in transportation infrastructure projects except Railways while there are few projects in urban infrastructure whose sponsoring authorities are State/ULBs level.

[13] The samples are the foreign-involved infrastructure projects which can have the information about domestic and foreign equity values. The items of 16 projects are 1 of Water, 5 of Roads, 5 of Ports, 4 of Airports, and 1 of Urban Development projects, while there are no projects of Power and Railways.

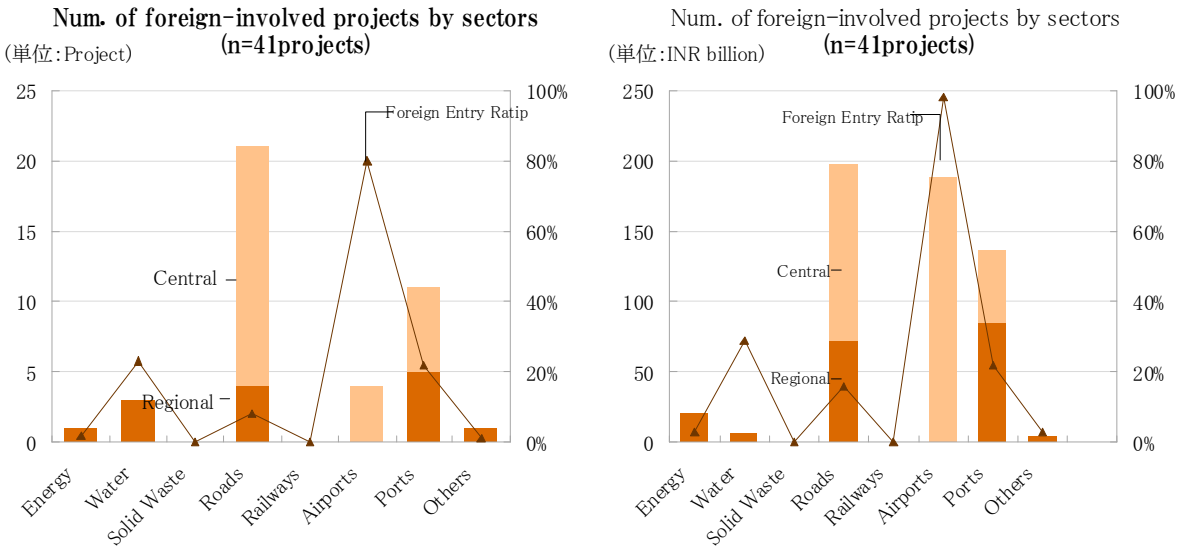

Figure 2-4 Results of foreign participation by sectors
(Source: PPP India Database)

② Foreign equity investment by sectors

As Figure 2-5 indicates, foreign-involved Roads projects tend to have relatively high foreign equity investments. Foreign companies have around 25 percent of equity in other sectors.

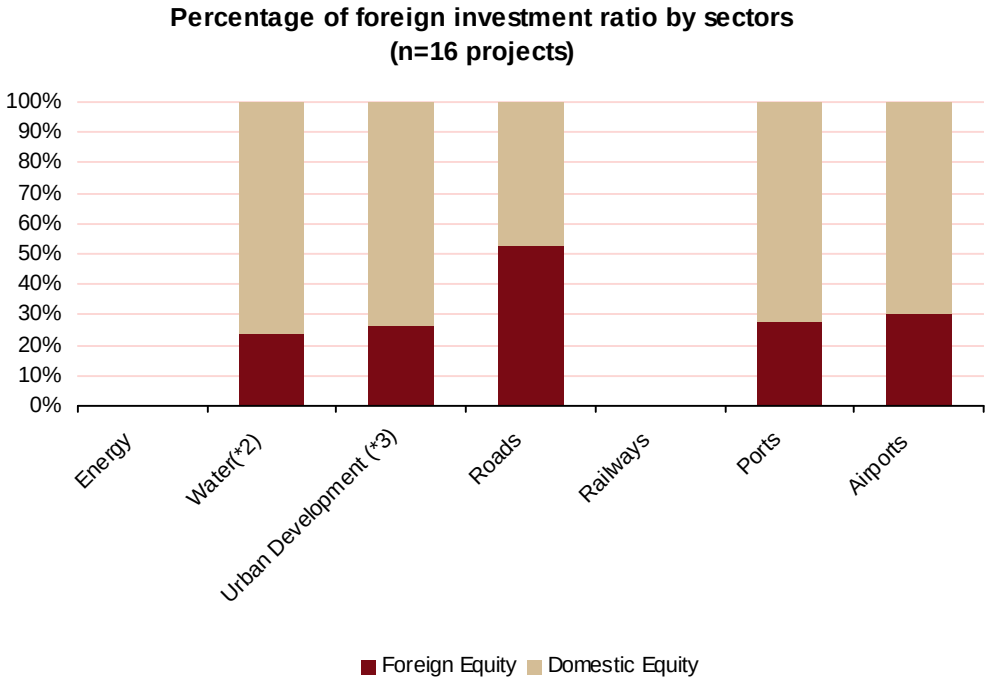

Figure 2-5 Percentage of foreign investment ratio by sectors
(Source: PPP India Database)

(3) Characteristic analysis for foreign participation and investment

As disucussed above, the status of foreign involvement into PPP Infrastructure is varied in the sectors and regions. As a non-legal prerequisite for foreign participation into PPP Infrastructure, this section focuses on the types of contract methods, size and selection criteria.

① Market accessibility for foreign participant

In Indian PPP Infastructure market, competitive bidding is dominant in order to handle the large number of projects with efficiency and transparency in selection of concessionaires. Although other unsolicited method called as "Swiss Challengs" (viewed in leading states like Gujarat, Karnataka, and so on) is recently emerging, it is still limited as an exceptional method.

The method of competitive procurement in India is categorized into three types, International Competitive Bidding (ICB), National/Domestic Competitive Bidding (NCB), and Limited Competitive Bidding (particularly "Limited International Bidding (LIB)"). Table 2-3 describes the key features of each type of bidding.

Table 2-3 Key features by types of competitive bidding

Type of bidding	Contract Values	Technical Requirement	Geographically or Periodically Intencity	Num. of Capable Developers
International Competitive Bidding (ICB)	Large	High	(not mentioned)	Many
National Competitive Bidding (NCB)	Small	Low	Scattered	Many
Limited International Bidding (LIB)	Small	High	(not mentioned)	Few

(Source: PPP in India Toolkit - Choosing the best-suited procurement method-)

Understandably, projects under ICB or LIB are suitable for foreign companies to participate than ones under NCB as Figure 2-6 indicates. However, the percentage of foreign-involved projects in a total number of ICB projects is 17%, which implys that market accessibility does not always lead foreign companies to win the bid. Indian companies are also competitive enough to win the bid in spite of the international level of technical or financial requirements in ICBs.

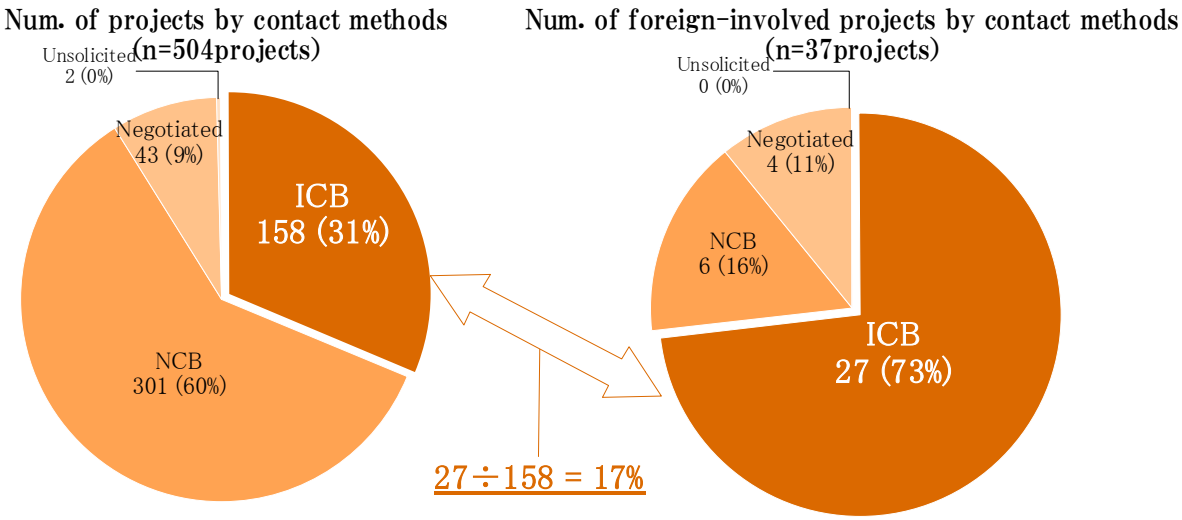

Figure 2-6 Comparison with the percentage of procurement methods
(Source: PPP India Database[14])

Figure 2-7 shows percentages of ICB projects in each sector and they would be one of the indicators of market accessibility for foreign companies.

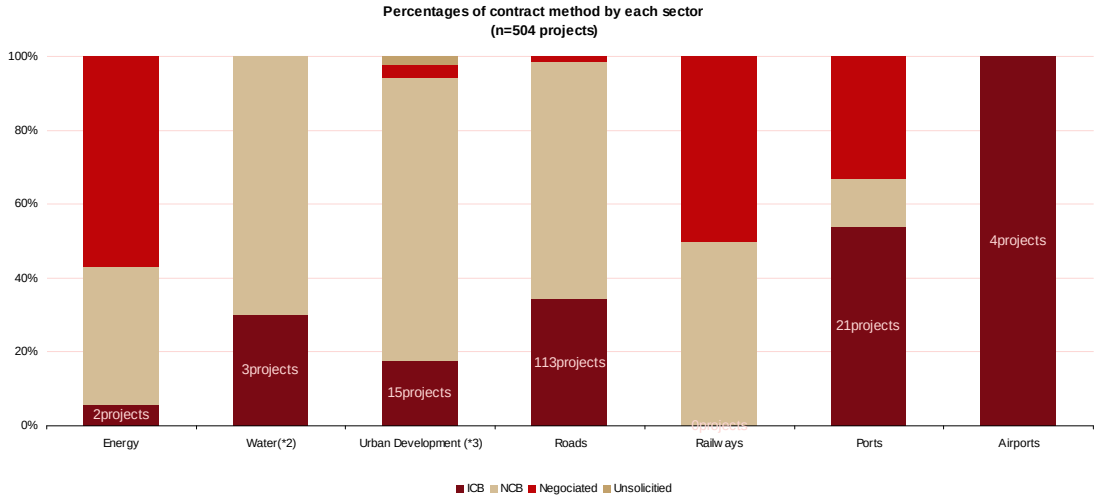

Figure 2-7 Comparison with the percentage of procurement method by each sector
(Source: PPP India Database)

- Sector with high accessibility for foreign participant
  - Ports

[14] The samples are infrastructure projects which can get the information about (a) project status and (b) contract method in PPP India Database.

– Airports

- Sector with middle accessibility for foreign participant

  – Water/Wastewater
  – Roads
  – Urban development (including Metro-Rails and Solid Waste Management)

- Sector with low or no accessibility for foreign participant

  – Energy (Power)
  – Railways

② Size of project

Generally speaking, new coming international players will be required more incremental development costs in oreder to invest infrastructure projects than domestic players. International players tend to be attracted at relatively large projects instead of small or scattered one. As Figure 2-8 indicates, the size of foreign-involved projects is larger than domectic ones, especially in Energy, Roads, and Airports sectors.

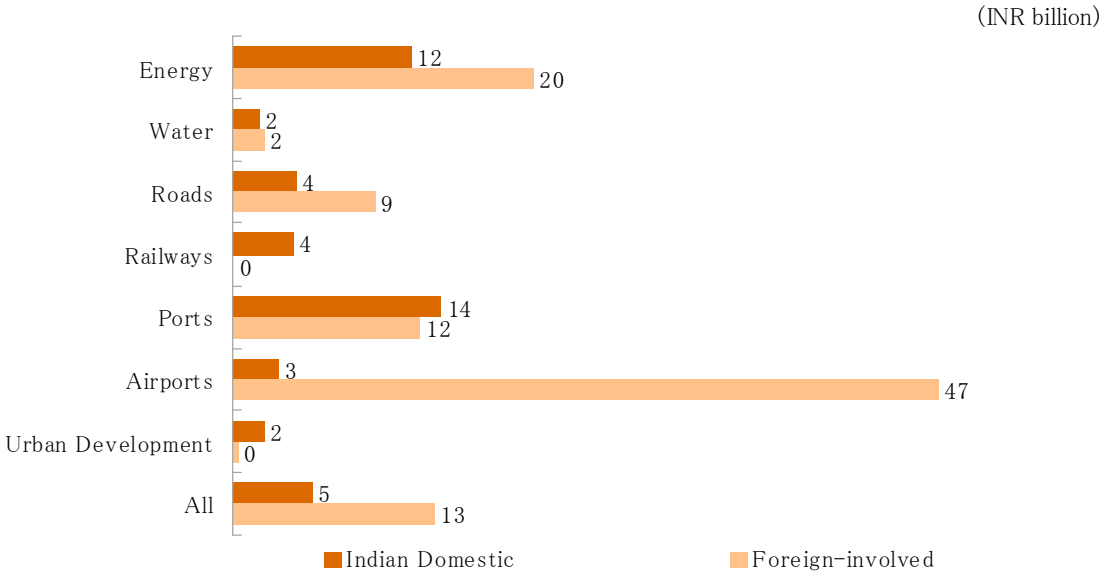

Figure 2-8 Comparison with average of total project cost by sectors
(Source: PPP India Database)

The size of the project it one of the factors to determine its procurement method to be ICB or not, although projects procured under ICB are not necessarily the larger projects than others. Figure 2-9 indicates the fact that in

some sectors, Energy or Ports, the size of project is larger in Negociated (MoU) style than in ICBs.

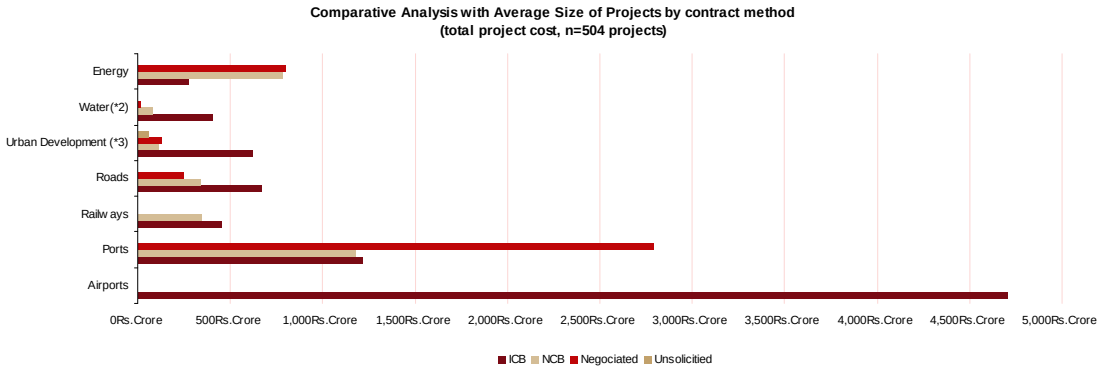

Figure 2-9 Comparison with average of total project cost by contract method
(Source: PPP India Database)

③ Selection criteria of concessionaire

As a characteristic principle for PPP procurement in India, it should be based on financial competitive bidding after the qualification process. The major financial selection criteria of conssionaires are below:

- Lowest Cost (Construction Cost or Serviece Cost)
- Lowest Concession Period
- Lowest Tariff (mainly, bulk purchasing tariff bv contacting aurhoity in power generation or bulk water supply)
- Lowest Payment from public authority (annuity, VGF, capital subsidy, state debt support)
- Highest Premium to public authority (upfront payment as negative VGF, gross revenue share rate)
- Lowest Payment/(or) Highest Premium
- Others

As Figure 2-10 indicates, most of foreign-involed projects might be selected on (a) lowest payment from a public authority or (b) highest premium, while the mixture type of “lowest paryment / highest premium” is fewer than projects by Indian-domestic.

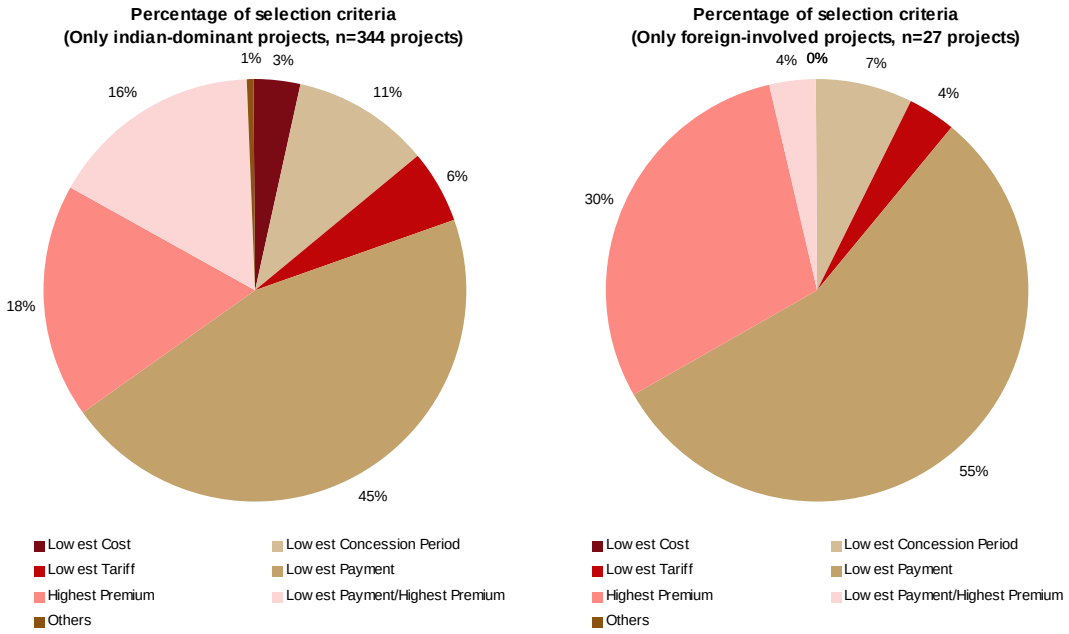

Figure 2-10 Comparison with the selection criteria between foreign-involved and not

(Source: PPP India Database)

Figure 2-11 expresses the representative selection criteria in each sector. If it were true that foreign-involved projects were strong in "Lowest Payment" or "Highest Premium" selection crireria, the sectors like Roads, Ports, or Urban Developmet with these simple but not so initiall cost intentive criteria would be good match to foreign-involved projects, while the sector like Energy or Water would not be so.

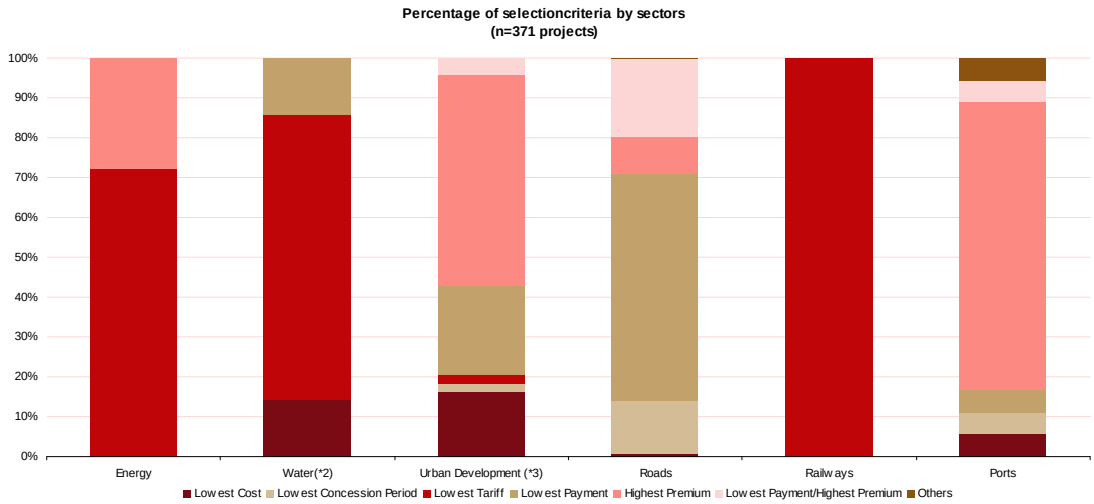

Figure 2-11 Conparison with the selection criteria by sectors

(Source: PPP India Database)

2.3.2. Major foreign participants and Indian partners of PPP Infrastructure

Existing foreign players in various Infrastructure sectors in India are as follows:

- Roads
  - Roads & Highways being one of the most lucrative infrastructure sectors has a fair representation from various countries including Malaysia, Korea, China, Russia, Turkey, Indonesia, Iran and Europe. The total value of contracts with foreign participation is estimated to be more than USD 2.4 billion as on December 2010. The key foreign players in the sector include John Laing, UK; Atlantia SPA; LG Engineering & Construction; Gamuda Malaysia-WCT Malaysia; Pacific Alliance Inc, USA.; Leighton Contractors, Australia; Centrodorstroy, Russia; IJM Corporation, Malaysia; Continental Engineering Corporation, Taiwan; Isolux Corsan, Spain; Italian Thai Development Projects Co. Ltd, Thailand; Limac Inc, Turkey, Galfar Engineering & Contracting SAOG, Oman.
- Water & Wastewater
  - Owing to the lower revenue potential in the sector, the presence of foreign companies is limited. Some of the key players include Veolia Water, BEFSA, Spain, Thames Water (U.K.), Dow Chemicals, Dupont, Emerson, Hydranautics, Pentair (U.S.), Grundfos (Denmark), Endress + Hauser, KSB Pumps, Krohne, Netzsch (Germany), Schlumberger/Actaris (France), Amiantit, Aplaco (Saudi Arabia) and Metrohm (Switzerland).
- Industrial Zone Development
  - The trend in industrial zone development is a function of the need of companies operating in each product/service offering. The international players in the IT/ITES space include Genpact India and Cognizant Technology Solutions India Private Limited.

Table 2-4 provides the list of foreign companies with their nationality, Indian partners, and involved projects, which are found in PPP India Database as developer/operator or sponsor.

Table 2-4 Major foreign participants to PPP Infrastructure in India from PPP India Database

Foreign Company	Major Indian partners	Project
Power		
CLP Power internacional (China, Hong Kong)	(none)	• Paguthan Expansion Project
Powergen (UK)	(none)	• Paguthan Expansion Project
Water/Wastewater		
Veolia Water (France)	• Doshion	• Shivpuri Water Supply Project • Karnataka Urban Water Sector Improvement Project
Befesa Agua (Spain)	• IVRCL	• 100 MLD Sea Water Desalination PlantÂ Reverse Osmosis
Roads&Highways		
Isolux Corsan (Spain)	• Soma Enterprises	• NH Panipat Jalandhar • NH Kishangarh Ajmer Beawar • NH Maharashtra Border Surat Hazira Port Section
IJM Corporation Berhad (Malaysia)	• Shroopji Pallonji Group • IDFC • IDBI	• NH Nellore-Tada Road • NH Mahua – Jaipur • NH Chilkaluripet-Vijayawada
United Engineers Berhad (Malaysia)	• GMR Group	• NH Ankapalli – Tuni • NH Tambaram – Tindivanam

Foreign Company	Major Indian partners	Project
John Liang (UK)	• DS Construction • IL&FS	• NH Lucknow-Sitapur Road • Mumbai Trans Harbour Link • Mumbai Trans- Harbour Sea Link Project
Atlantia Spa (Italy)	• Navinga Buildcon	• NH Pune Sholapur Pkg – I
Gamuda (Malaysia)	(none)	• NH Panagarh – Palsit • NH Palsit – Dankuni
WCT Berhad (Malaysia)	(none)	• NH Panagarh – Palsit • NH Palsit – Dankuni
Apollo (UK)	• DS Construction	• NH Lucknow-Sitapur Road • NH Raipur Durg Expressway
Galfar (Oman)	• SREI • Simplex Engineering	• NH Chandikhole - Jagatpur – Bhubaneshwar • NH Ghaziabad-Aligarh • Road - Indore Ujjain 4-laning
AIDC Group (USA)	(none)	• NH Vivekananda Bridge and Approach
STRADC (Phillipines)	(none)	• NH Vivekananda Bridge and Approach
Elsamex S.A (Spain)	• Ramky Infrastructure	• Design Construction Development Finance Operation and Maintenance

Foreign Company	Major Indian partners	Project
	• IDFC	of 8 Lane Access Controlled Expressway
Sumitomo Mitsui Construction (Japan, ※EPC)	• IL&FS	• Delhi-Noida Toll bridge
Metro-Rail		
Veolia Transport (France)	• Reliance Infrastructure	• Mumbai Metro-Line □
SNC Lavalin (Canada)	• Reliance Infrastructure	• Mumbai Metro-Line □
CAF (Spain)	• Reliance Infrastructure	• Delhi Airport Metro Express
Ports		
Dubai Ports World (UAE) (with P&O Ports (UK))	• CONCOR • ULA • DVS Raju • Chettinad Group (□P&O) • IDFC	• Cochin Port Trust • JNPT - 2nd Container Terminal,NSICT (□Brown-field) • Gangavaram Port (□Divested) • Multipurpose berth at Outer Harbour at Visakhapatnam Port Trust • Chennai Container Terminal
AP Moller Maersk A/S Group (Denmark)	• CONCOR	• JNPT - 3rd Container Terminal, GTIPL
APM Terminals (Netherland)	• IDFC • IL&FS • IDBI	• Pipavav Port

Foreign Company	Major Indian partners	Project
Integrax Berhad (Malaysia)	• DVS Raju	• Gangavaram Port (□Brown-field)
Precious Shipping (Thailand)	• L&T	• Berth 4A (Haldia) Project
Stevedoring Services of America (USA)	• L&T	• Berth 4A (Haldia) Project
Portia Management Services (UK)	• South india Corporation • Navayuga Engineering company	• Coal Terminal (Ennore Port)
Gaz de France (France)	• Indian Oil Corporation • Gas Authority of India	• Dahej LNG Terminal
Foster Wheeler Energy (UK)	• Indian Oil Corporation • Gas Authority of India	• Dahej LNG Terminal
Total Gaz & Electricite Holdings France (France)	• Shell International Oil Products	• Hazira LNG Terminal

(Source: PPP India Database etc.)

Chapter 3 Current status of PPP Infrastructure in specific regoions and sectors

3.1 Overview of the PPP infrastructure within India's specific regions and sectors

Over the past ten years or so, India has been engaged in various incentives to promote PPP within its infrastructure sector and has steadily increased the number of PPP projects implemented through the relatively high capacity of its domestic companies and financial institutions compared to other emerging countries. Nevertheless, it should be noted that most of the past PPP projects relate to the national highway by NHAI, an agency related to the central government, and the level of maturity and future potential for PPP differ by region and sector. This can be in particular observed with infrastructure projects implemented by the state government/ULBs.

Based on the above and on the assumption of what has been described in Chapter 1, this chapter will look at the current status of the PPP infrastructure in certain regions and sectors, so as to have a more specific understanding of the current situation. The regions and sectors that are subjects of the study in this chapter have been identified through discussions with JICA and the study group by taking account of the possibility of entry by Japanese companies, and of the existing relationship established between JICA and relevant agencies, such as state governments.

The below 5 states and 1 region are the subjects of this chapter in which the characteristics observed will be described from 4 points that are: 1) overview, including the status of implementation of PPP infrastructure; 2) PPP infrastructure framework including the cross-sector legal systems; 3) industrial development framework including the legal system; and, 4) individual PPP infrastructure support schemes by relevant agencies, such as state governments:

- Western Gujarat
- Western Maharashtra
- South-central Karnataka
- Southern Tamil Nadu
- Northern Haryana
- (Reference) DMIC (Delhi-Mumbai Industrial Corridor)

For projects by state governments and relevant agencies in the above 5 subject states, excluding DMIC, this chapter will point out the characteristics seen within the below 4 sectors from the point of: 1) overview, including the status of implementation of PPP infrastructure; and, 2) framework including the legal system for the promotion of PPP infrastructure within such sector:

- Power
- Water
- Roads
- Ports

3.2 Current status of the PPP infrastructure within certain regions

3.2.1. Comparative analysis of the level of maturity and potential of the PPP infrastructure

Table 3-1 shows an overview of: (1) the level of maturity; and, (2) potential, of PPP infrastructure in the 5 states subject to the research. "(1)The level of maturity" is comprehensively reviewed from 4 aspects which are: (a) the number of PPP projects implemented by the state government/state ULB[15]; (b) the region's various framework on the promotion of PPP infrastructure; (c) the state government's various framework on industrial development; and, (d) individual PPP infrastructure support schemes of relevant agencies, such as state governments. "(2) Potential" is comprehensively reviewed from 2 aspects which are: (a) the number of PPP projects scheduled to be implemented by the state government/state ULB; and, (b) the existence of a special framework for the promotion of individual sectors.

[15]Projects with a concession agreement in effect (under construction or in service). The larger of the following is applied: 1) of the infrastructure projects found in the PPP India Database and located in the relevant state, number of projects excluding those by NHAI, Major Port Trust and other central government related agencies; or, 2) number of projects in the project database announced by infrastructure controlling agencies within the state government, such as GIDB.

- Gujarat: Level of maturity... extremely high; potential... extremely high
  - Other than Andhra Pradesh and Punjab, Gujarat is the only state that has a comprehensive, legal framework on building infrastructure through PPP (GIDA), and the unified PPP infrastructure framework by the Gujarat Infrastructure Development Board (GIDB) as stipulated under this act is recognised as Best Practice in India. Furthermore, the state also has a comprehensive, legal framework on building multi-sector infrastructure (for industrial use) accompanying the development of industrial complexes and urban development for industrial promotion (SIR Act). GIDC which is an institution that has overall control over industry-led infrastructure development, plays a role in promoting PPP infrastructure development for the state in conjunction with the above-mentioned GIDB. Due to the systematic way of promoting infrastructure building through its 2 legal systems -GIDA and SIR Act-, and 2 controlling agencies -GIDB and GIDC-, Gujarat has a rare track record of PPP infrastructure projects within India.
  - The state government's various measures for promoting the building of infrastructure as described above has led to Gujarat's outstanding pipeline for PPP infrastructure projects in comparison with other states. The state has established individual development policies for the following sectors: 1) power (electric power generation, transmission, distribution, solar power generation, wind power generation); 2) roads; 3) ports; and, 4) industrial complex/urban development.

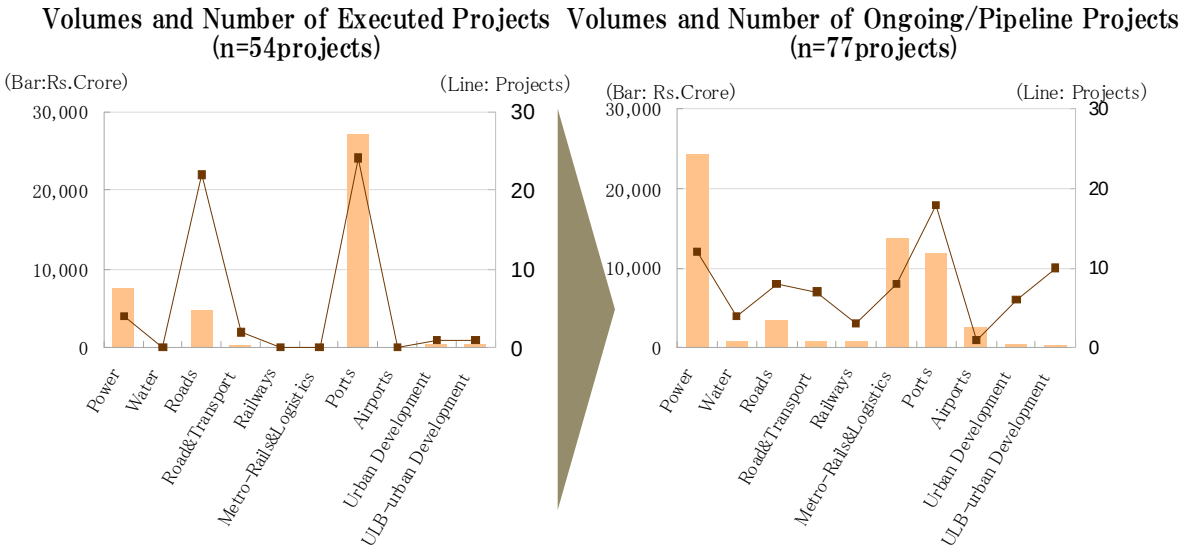

Figure 3-1 Sectoral Trends of PPP Projects in Gujarat
(Source: pppinindia.com)

- Maharashtra: Level of maturity...high; potential...high

  – Maharashtra has an outstanding track record in PPP projects among the states in India, as the economic expansion of the state capital, Mumbai -India's largest city-, and the existence of abundant private sector players contributed in the development of PPP infrastructure for individual projects. Meanwhile, when compared to Gujarat and Andhra Pradesh, an unified framework for PPP infrastructure has not been established in Maharashtra, and it is only recently that moves for a unified PPP infrastructure framework have started, supported by ADB and PPIAF.

  – With respect to future potential, a large number of infrastructure development projects are expected as in the past, as the above framework for PPP infrastructure is gradually being established, and as Maharashtra's JNPT (*JNPT itself is a port under the control of the central government) is regarded as the destination for the DMIC concept. The state has established individual development policies for the following sectors: 1) urban infrastructure in general; 2) ports; and 3) industrial complex/urban development.

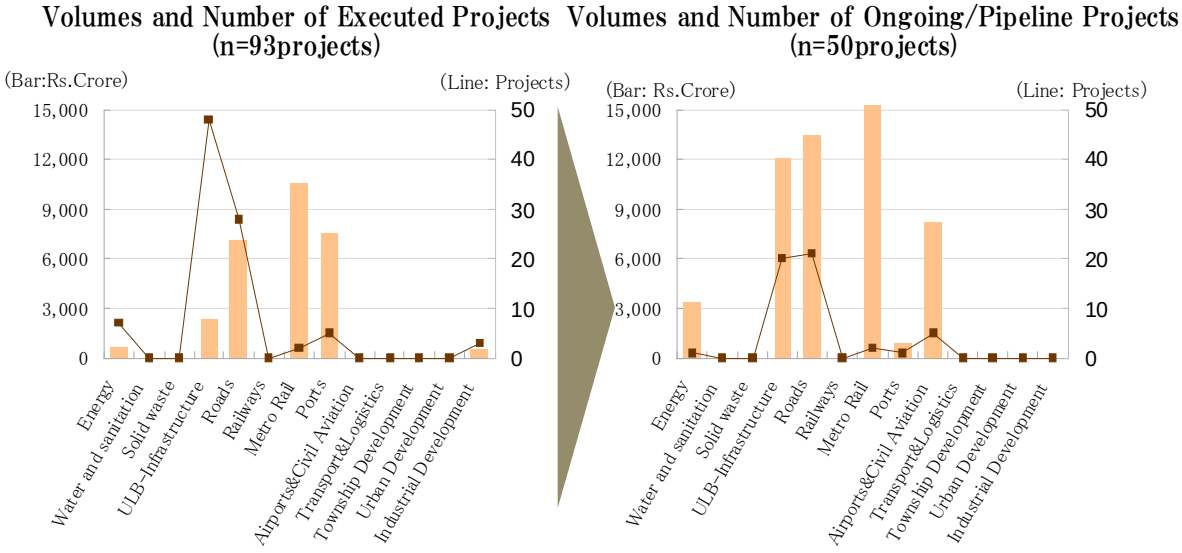

Figure 3-2 Sectoral Trends of PPP Projects in Maharashtra
(Source: pppinindia.com)

- Karnataka: Level of maturity...high; potential... extremely high

  – Although the number of PPP infrastructure projects implemented by Karnataka does not reach that of Gujarat or Maharashtra, it has been engaged in rapidly building the public sector's PPP promotion structure during the past few years, starting from the establishment of the IDD -a control agency for PPP infrastructure development-, and as can furthermore be seen in its strong PPP initiative that prioritises the PPP method in infrastructure development and clear commitment by the state government towards land expropriation and the acquisition of licenses and approvals, and the announcement in November 2011of a new act for the promotion of infrastructure development.

  – In terms of future potential, Karnataka is one of the states, together with Gujarat, where promotion of the PPP infrastructure is most expected with its establishment of a strong, political initiative by the state government and the rapid economic growth of the southern Indian states, including itself. The state has established individual development policies for the following sectors: 1) renewable energy; and, 2) industrial complex/urban development.

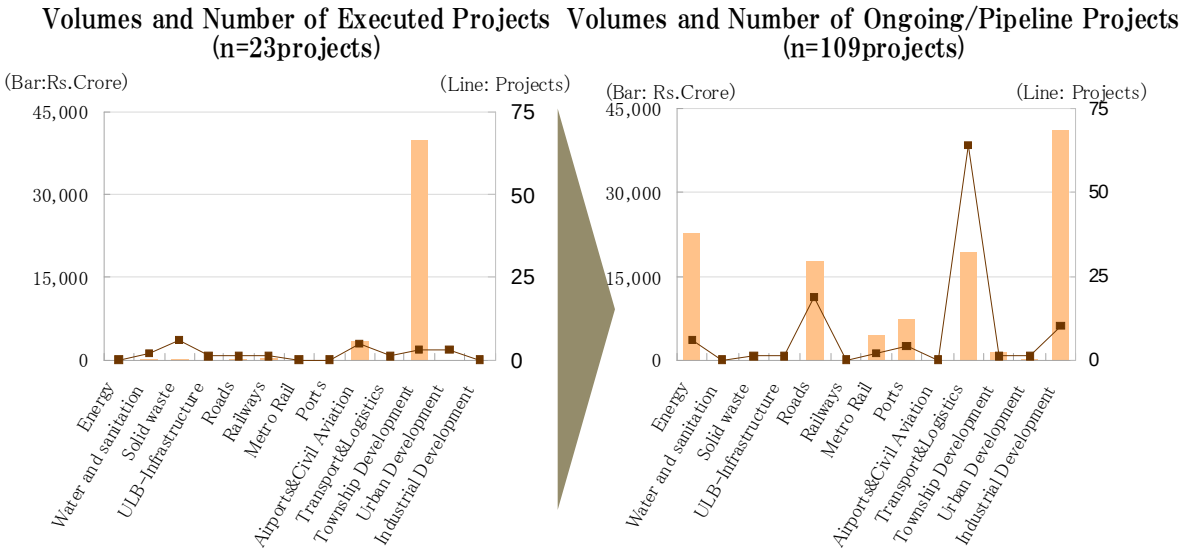

Figure 3-3 Sectoral Trends of PPP Projects in Karnataka
(Source: pppinindia.com)

- Tamil Nadu: Level of maturity...medium; potential...medium

  – Although Tamil Nadu's number of PPP infrastructure projects implemented and progress on the establishment of a cross-sector infrastructure control agency do not reach that of Gujarat or Maharashtra, it has a certain amount of track record in PPP infrastructure projects as there have been many multi-sector infrastructure developments (for industrial use) led by secondary industries, in particular, the auto industry. Tamil Nadu's increase in its population due to the rapid economic growth and industrialisation, in addition to the lack of water source from geographical features, have promoted PPP water infrastructure projects from an early stage.
  – Potentially, the state expects multiple industry-led infrastructure development projects, same as in the past, although a unified initiative on PPP is required. The state has established individual development policies for the following sectors: 1) ports; and, 2) industrial complex/urban development.

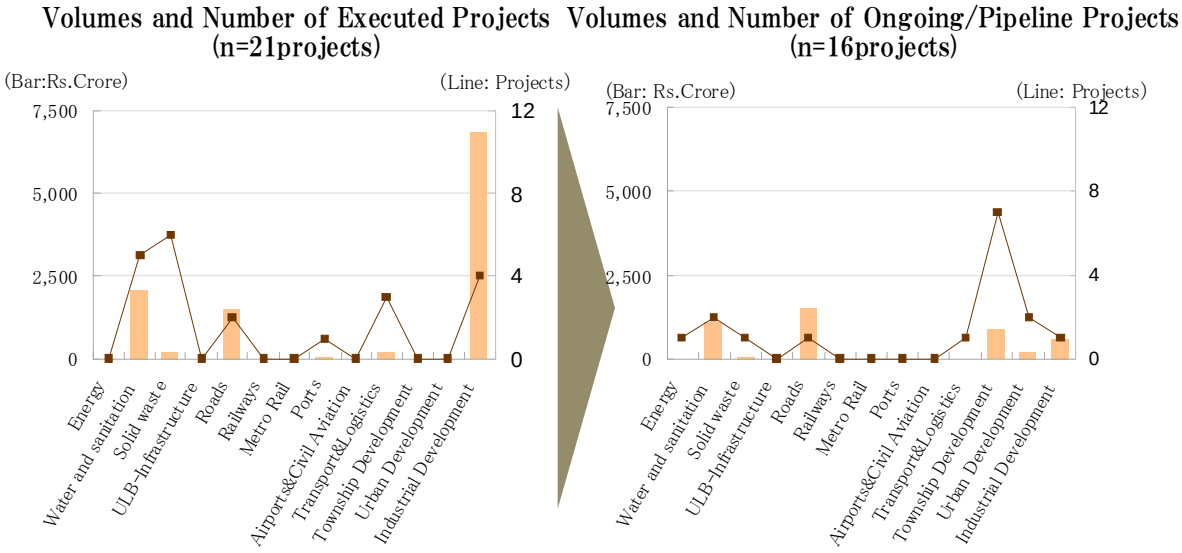

Figure 3-4 Sectoral Trends of PPP Projects in Tamil Nadu
(Source: pppinindia.com)

- Haryana: Level of maturity...low; potential...high

  – Being located next to Delhi –a state placed at the centre of India's politics-, Haryana has been engaged in the development of various infrastructures, including power, from an early stage. As a result, its level of maturity of systems for implementing PPP was not necessarily high compared to other states. Nevertheless, the DMIC concept urged a review of the industrial development plan which included secondary industries in addition to the tertiary industries such as the IT industry which had been the focus, and as a result, the PPP Cell and PPP Policy were established for promoting the development of infrastructure as there arose a need to further improve capacity.

  – In future, there is expectation for more infrastructure development through PPP than in the past, due to the promotion of multi-sector development (for industrial use) under the PPP Cell and PPP Policy's unified initiative and based on the DMIC concept. The state has established individual development policies for the following sectors: 1) renewable energy; and, 2) industrial complex/urban development.

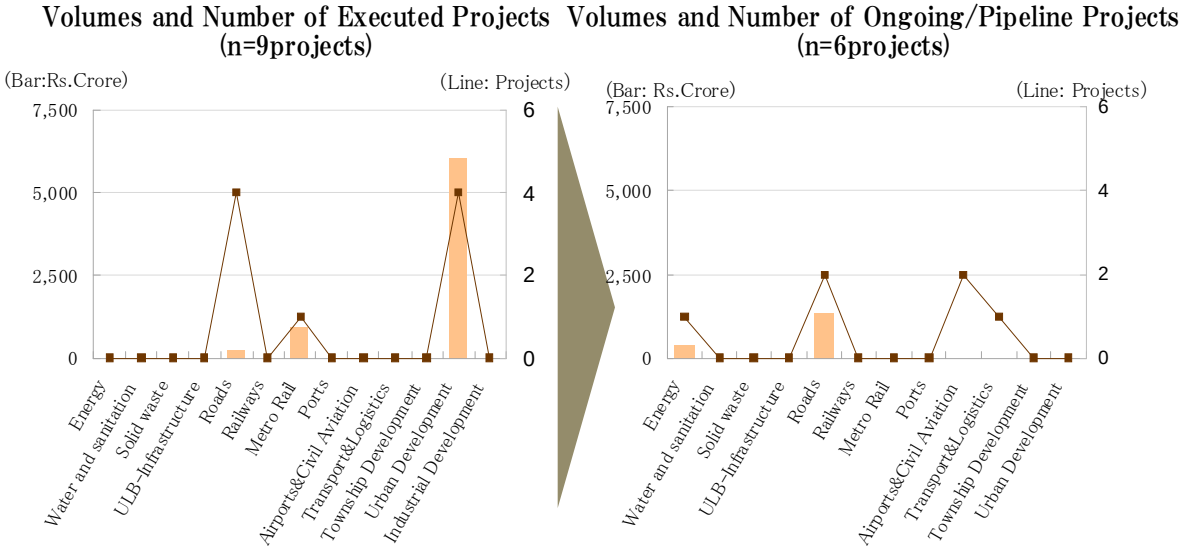

Figure 3-5 Sectoral Trends of PPP Projects in Haryana

Source: pppinindia.com

Table 3-1 Overview of Infrastructure PPP maturity and potential in specific states

	Gujarat	Maharashtra	Karnataka	Tamil Nadu	Haryana
PPP Maturity	Extremely High	High	High	Medium	Low
Results of regional PPP projects					
Num. of executed projects[16]	• 54projects	• 93 projects	• 23projects	• 21 projects	• 9 projects
Key Executed Setor	• Power • Roads&Transport • Ports	• Energy • ULB Infrastructure (incl. Water and Sanitation) • Roads • Metro-Rails • Ports	• Water and Sanitation • Solid Waste • ULB-Infrastructure • Airports • Transport • Townships / Urban Development	• Water and Sanitation • Solid Waste • Roads&Transportation • Ports • Industrial Development	• Roads • Metro-Rails • Urban Development
Infrastructure PPP					
• Legislation setup	• Gujarat Infrastructure Development Act (GIDA), 1999				
• Policy setup	• Gujarat Infrastructure	• Proposed PPP	• Infrastructure Policy	•	• PPP Policy

[16] Projects before Bidding stage (until EOI stage)

	Gujarat	Maharashtra	Karnataka	Tamil Nadu	Haryana
	Agenda – Big 2020	Policy • PPP Toolkits	2007 • Guidelines for Procurement of PPP projects through Swiss Challenge Route, 2010		
• Institutional setup	• Gujarat Infrastructure Development Board (GIDB) • Gujarat Urban Development Company Limited (GUDC)	• PPP Cell • Maharashtra Urban Infrastructure Development Company Limited (MUIDCL)	• Government of Karnataka (GoK) • Infrastructure Development Department (IDD) • State High Level Committee (SHLC) • Single Window Agency (SWA) • PPP Cell • District PPP Committee • iDeCK • Karnataka Urban	• Tamil Nadu Urban Infrastructure Financial Services Limited (TNUIFSL)	• PPP Cell under Finance Department

	Gujarat	Maharashtra	Karnataka	Tamil Nadu	Haryana
			Infrastructure Development & Finance Corporation (KUIDFC)		
Industrial Development					
• Legislation setup	• The Special Investment Region (SIR) Act, 2009				
• Policy setup	• Industrial Policy • Vibrant Gujarat 2011	• Special Economic Zone (SEZ) Policy 2006 • Industrial Investment & Infrastructure Policy 2006		• Industrial Policy 2007 • SEZ Policy 2003	• Industrial & Investment Policy 2011
• Institutional setup	• Gujarat Industrial Development Corporation (GIDC)	• Maharashtra Industrial Development Corporation (MIDC)	• Karnataka Industrial Development Board (KIADB) • Karnataka State Industrial & Infrastructure Development	• Project Approvals Authority (PAA) • State level Investment Promotion Board (SIPB) • Tamil Nadu Industrial	• Haryana State Industrial and Infrastructure Development Corporation (HSIIDC)

	Gujarat	Maharashtra	Karnataka	Tamil Nadu	Haryana
			Corporation (KSIIDC)	Guidance & Export Promotion Bureau • Tamil Nadu Industrial Development Corporation Limited (TIDCO) • State Industries Promotion Corporation of Tamil Nadu Ltd. (SIPCOT)	
Supporting scheme of Infrastructure PPP by state governments/ authorities					
Supporting Schemes	• State VGF	• State VGF • MSJNM • MUIF (PDF, PFF, DSRF)	• State VGF • KIPDF • KWSPF • Other (approval support, contingent guarantee, etc.)	• State VGF • TNUDF • WSPF	• State VGF
PPP Potential	Extremely High	High	Extremely High	Medium	High
Num. of upcoming projects	• 77projects	• 50 projects	• 109projects	• 16 projects	• 6 projects

	Gujarat	Maharashtra	Karnataka	Tamil Nadu	Haryana
Active / Potential Sector	• Power • Wind Power • Solar Power • Roads &Transport • Metro-Rails • Ports • Airports • Urban/ULB Development • SIRs/ SEZs	• ULB-Infrastructure • Roads • Metro-Rails • Ports • Airports & Civil Aviation • SEZs	• Energy • Renewable Energy • Roads&Transportation • Metro-Rails • Ports • Industrial Development • SEZs	• Water and Sanitation • Roads • Ports • Townships Development • Industrial Development • SEZs	• Energy • Renewable Energy • Roads • Aiports & Civil Aviation • SEZs

(Source: prepared by Study Team referring pppinindia.com and state authorty's websites)

3.2.2. Current status of PPP Infrastructure in Gujarat

(1) Overview of PPP Infrastructure

① Introduction

The state of Gujarat has been quite successful in executing projects under Public Private Partnerships. In fact it is one of the first states that enacted special legislations for infrastructure development through PPP that cuts across sectors and created institutions for undertaking these initiatives. The thrust of PPP in the state has been in port and road sectors. Several factors contributed to making a state an attractive investment destination:

- A. Proactive policies: The government's policy towards investment has given it a head start in the sector.
- B. Availability of natural resources: Certain industries like petrochemicals have a high dependence on availability of natural resources. The discoveries of gas reserves have provided a fillip to the industries in the state.
- C. Capability: The gems and jewellery industry in Gujarat relies on the skilled work force available in the state. The state is a leader in terms of labour productivity. This has been a major factor enabling its success in sectors like engineering, petrochemicals and gems and jewellery.

② Implementation status of PPP Infrasturtucre in Gujarat

The concept of PPP was introduced in the State of Gujarat in the early 1990s, when the Gujarat Maritime Board commenced construction of the Pipavav port. Since then, 45 projects with an outlay of over Rs 20,000 crore have been implemented through private sector participation. The State has also proposed several projects under Viability Gap Funding (VGF) scheme. These include Ahmedabad Bus Rapid Transit system; Rajkot–Jamnagar–Vadinar Road; Ahmedabad Convention Centre; Dahej SEZ; four laning of Halol–Godhra–Shamlaji Road and Ahmedabad– Viramgam Road; etc. The state government encourages PPP projects in Ports, Roads, Power, Urban Infrastructure , water supply and sanitation, setting up of SEZs, railways etc.

The State has developed a shelf of projects with an investment of Rs 860,000 crore in power, gas, ports, roads, urban infrastructure, airports etc. These projects are envisaged to be implemented by 2020. The state government actively encourages investment in these projects that can be construed to be priority areas for the state.

As mentioned above, Gujarat has been a pioneer in attracting private investment in infrastructure. Gujarat has a legal framework in the form of the GID Act, organization for developing PPPs in the form of GIDB and sector

policies in place to attract private sector investments. PPP projects in various sectors are undertaken with the co-ordinate efforts of the concerned department / agency and GIDB. The two entities work together in project conceptualisation (involving technical specifications), managing the bid process, selection of developer and signing of the concession agreement. However, GIDB does not finance the project and therefore, the financing aspect remains the primary responsibility of the concerned department / agency responsible for a particular project. As far as the state VGF is concerned, GIDB being the nodal agency is responsible for implementation. GIDB has developed various model documents – bid documents, model concession agreements, etc – that facilitate in going through the process of PPP.

Table 3-2 PPP Project Snapshot in Gujarat

Sector	Completed/ Operational		EOI Stage		Bidding Stage:RFQ/RFP		Construction: Project Awarded (LOI Issued		Pipeline: Study/ Planed / announced		Total Projects	
	Nos.	Inv. (Cr.)	Nos.	Inv. (Cr.)	Nos.	Inv. (Cr.)	Nos.	Inv. (Cr.)	Nos.	Inv. (Cr.)	Nos.	Inv. (Cr.)
Port	16	15542	5	2900	7	5479	8	11701	6	3525	42	39147
Power	4	7600	0	0					12	24245	16	31845
Road	18	2081	1	1020	5	2269	4	2620	2	150	30	8140
Road & Transport	0	0	3	400	1	250	2	250	3	200	9	1100
Railways	0	0	1	499					2	312	3	811
Water	0	0	0	0	1	700			3	150	4	850
IT & ITES	4	0							0	0	4	0
Aviation	0	0	0	0					1	2500	1	2500
Urban Development	0	0	3	17			1	500	3	500	7	1017
ULB-urban development	1	485	1	50					9	242	11	777
Other-Metro rail, Regional Rail system, Six Logistic Parks	0	0	0	0	0	0	0	0	8	13800	8	13800
Total	**43**	**25708**	**14**	**4886**	**14**	**8698**	**15**	**15071**	**49**	**45624**	**135**	**99987**

(Source: PPP Project Database; www.gidb.org (site last updated in June 2011))

(2) Legislative/ Policy/ Institutional framework for PPP Infrastructure

① Legislative framework

– Gujarat Infrastructure Development Act, 1999[17]

The GID Act – 1999 is a progressive Act formulated in consultation with Industries, Investors, developers and policy planners. It was further amended in 2006. The Act is indicative of Gujarat Government's commitment to Private Sector Partnership (PSP) and provides a legal, consistent and transparent framework for the same. The GID Act-1999 upholds competitive bidding as the preferred mode for PSP. At the same time, it recognizes the Swiss Challenge route for unsolicited proposals and the scope for negotiation in certain clearly given situations. The GID Act establishes the procedure for various modes of PSP and thereby provides a level playing field to all stakeholders. A concession period of maximum 35 years is allowed under this act, however it can be extended with mutual consultation of the parties involved. It provides three modes for private sector participation in Infrastructure Projects as follows:

- Competitive bidding (section-9 GID Act)
  - It is preferred as the most preferred mode for the public sector participation in infrastructure sector
  - The cost/user charges/subsidy reduces through this mode and/or enhances revenues to Government
  - It provides legal sanctity to the procedure of bidding
  - Detailed procedure is laid down for technical and financial bid processing
  - Even the spread and periodicity of tender bid notice is part of the Act
  - It allows two-stage bidding process: technical and financial
- Comparative bidding/ SWISS Challenge Route (section-10 GID Act)
  - Unsolicited proposals which does not require state subsidy are processed through this route
  - Involves three stages:
    - acceptance of the project by the Government and that it can be delivered by the developer in a time frame
    - detailed negotiations to arrive at a consensus on the project parameters including the price

[17] Source http://www.gidb.org/cms.aspx?content_id=21

- competitive bidding on functional specifications of the project taken as fait accompli
- If better proposal (s) is received, the original proponent is given the pportunity to make his proposal competitive with that
- If he fails, the project goes to the selected bidder

– The project development cost can be reimbursed

Schedule III of the Act specifies 'Projects of Special nature' that can be considered under Swiss challenge route. These are:

– A project which is innovative or involves proprietary technology or franchise which is exclusively available with the person globally
– A project wherein competitive public bidding as provided in section 9 has failed to select a developer
– A project to provide social services to the people including community services and public utilities
– An infrastructure project which is an essential link for another bigger infrastructure project owned or operated by the same person

So far 3 Mini Micro Hydel Projects at Karnaj, Vanakbori and Damanganga Dam Site have been taken up on Swiss challenge route

- Direct negotiation (section-10A GID Act)

– It involves projects having innovative or involves proprietary technology or franchise which is exclusively available with the person globally
– A project wherein competitive public bidding as provided in section 9 has failed to select a developer
– A project to provide social services to the people including community services and public utilities
– An infrastructure project which is an essential link for another bigger infrastructure project owned or operated by the same person

② Policy framework

– Gujarat Infrastructure Agenda – Big 2020

The Gujarat Infrastructure Agenda/Big 2020 comprises a shelf of projects conceived by different departments and integrated into an overall agenda based on the priorities and inter-relationships of the projects. The agenda prioritises the projects, identifies sector issues, inter-linkages with other projects and proposes an action agenda. In BIG 2020 an investment of around Rs. 11, 80,912

crore is planned for the period up to the year 2020. This investment covers sectors such as energy, transportation, SEZs / investment regions, urban infrastructure, water, tourism, IT, education and health and human resource development. It also presents the phasing of the investments across the period and identifies investments to be made by the Government and the private sector.

These strategies will guide the infrastructure sectors in an orchestrated manner considering sector priorities and inter linkages with other sectors. The key strategies are:

- Securing the future energy needs of Gujarat's growing economy
    - Achieving (Upper Middle Income) UMI countries per capita power generation and consumption benchmarks by building large capacities in power generation
    - Making gas a preferred fuel across the urban and industrial landscape of Gujarat
- Accelerating industrialisation by developing world class and globally competitive industrial infrastructure
- Developing seamless, efficient and high speed integrated transport networks conforming to global standards
- Becoming a major international player in sea freight logistics
- Developing cities that are safe, efficient, clean and green, and offer a high quality of life
- Ensuring safe, reliable and affordable drinking water across Gujarat, and provide stable water supply for agriculture
- Making Gujarat a global tourist destination
- Creating good healthcare infrastructure to achieve healthcare indices and to reach UMI benchmarks
- Creating widespread network of educational institutions to make Gujarat a globally recognised knowledge society
- Creating a network of post harvest agriculture infrastructure to ensure better access to markets

③ Institutional framework

– Gujarat Infrastructure Development Board (GIDB)

- GIDB is responsible for:
    - Overall planning of infrastructure projects and preparing the frame work for execution

- Preparing the projects by conducting pre feasibility studies through reputed Consultants
- Preparing Model Concession Agreements which detail the risk allocation in a Public Private Partnership
- Oversees competitive bidding process
- Advises the Departments on financial structuring
- Coordination between various sectoral Departments
- Monitoring of the progress of projects
- Capacity Building of Government staff in infrastructure sector compatible with international standards
- Bringing in international experience and best practices by interacting with other agencies and multi lateral institutions

- Composition of GIDB:

The Chief Minister of state is the chairman of the GIDB. The Minister of State, (Industries) is the Vice Chairman of the Board and Head of the Executive committee. In addition to other ministers in the GIDB, the GIDB and its Executive Committee comprises of Senior Secretaries, Department Heads and Technical experts.

- Gujarat Urban Development Company Limited (GUDC)

Gujarat Urban Development Company Ltd is working under the Urban development & Urban Housing Department in The State.

- Key responsibilities of GUDC:

- Urban planning and development
- Development of urban infrastructure
- Making available serviced lands
- Social infrastructure like gardens, playgrounds, schools etc
- Transportation systems
- Housing for lower income group and economic weaker section

(3) Legislative/ Policy/ Institutional framework for Industrial Development

① Legislative framework

- The Special Investment Region (SIR) Act – 2009[18]

The state government has enacted a legal framework for the SIR – The Gujarat

[18] Source http://www.gidb.org/cms.aspx?content_id=95

Special Investment Region Act 2009. It has come into effect from 6th January 2009.

The SIR Act, inter alia, provides for following matters:

- It enables the State Government to establish, develop, operate and regulate the Special Investment Regions (SIR)
- The Government is empowered to declare Investment Region or Industrial Area and designate them as Special Investment Region (SIR)
- An Investment Region will have as area of more than 100 sq. Kms and an Industrial Area will have an area of more than 50 sq. Kms
- A four tier administrative mechanism is set up for establishment, operation, regulation and management of the SIRs
- The administrative mechanism comprises of an Apex Authority (GIDB), a Regional Development Authority (RDA) for each SIR, a Project Development Agency and project specific SPVs

Table 3-3 4th-tier institutional structure in SIR Act

Body	Function
Apex Body (GIDB)	To regulate and monitor
Regional Development Authority (RDA)	To secure planned development of the SIR and shall take steps for its effective regulation and efficient management
Project Development Agency	To give support and guidance to the RDAs and other agencies, developers and entities involved in the task of development of projects
Project Specific SPV's	To develop the projects

(Source: gidb.org)

- The Apex Authority will be the highest policy making body
- The RDA will look after the ground level issue of development & regulation
- The RDA will make its own regulations for building, construction and development
- The Apex Authority will be the single window system and the first contact for the setting up any economic activity or amenity in the SIR
- It empower the state government for setting up of a Project Development Agency
- Government has already formed such a project development company in the name of "Gujarat Industrial Corridor Company" (GICC)
- It provides for effective internal dispute settlement mechanism: a three tier system
- It provides an effective framework for private sector participation in infrastructure by drawing upon the Gujarat Infrastructure Development Act (GID) Act – 1999.

② Policy framework

– Industrial Policy

The Government of Gujarat had announced its New Industrial Policy in September 2003, taking a holistic view of all the facets concerning the future course of industrialization in the State. Through the implementation of the policy, it is aimed to create a conducive business-friendly environment captivating enough for a discerning investor of the present time, thereby enabling Gujarat to emerge as the most competitive destination for investment in the 21st century.

The important features that differentiate the policy from the erstwhile policies include the following initiatives:

- Creating and sustaining a Global Brand Image for Gujarat and its products
- Information and facilitation considered the key for attracting investment.
- Good governance
- Labour reforms to facilitate industrial investment to generate employment and ensuring productivity.
- Up gradation of Industrial and Urban Infrastructure
- Power reforms
- Rationalisation of taxation regime
- Port led development and setting up of SEZs
- Focusing on strength of Gujarat – Manufacturing
    - Concerted efforts towards innovation, technology up gradation and value-addition
    - Development of service sector – around strong manufacturing base
    - Export competitiveness
    - Consultative approach for policy initiatives (Phase I) and sector-specific strategy approach (Phase II).

– Vibrant Gujarat 2011

Over the last several years, Gujarat has not only been a prominent investment destination, but it has also created a brand in the form of “Vibrant Gujarat”. Held since 2003, this biennial global investor meet showcases the investment potential in Gujarat.

In a gradual deviation from previous events, the 5th edition of the summit had been renamed as 'Vibrant Gujarat 2011: The Global Business Hub, as a result of which the event saw participation from many Countries, Indian States and Companies, using the Vibrant Gujarat’s platform, to show case their strengths in

various sectors. More than 13 Country and State seminars were organized during the 2 day long summit. These seminars were a great success and all these seminars were able to garner huge participation and investors' interest. '

The Vibrant Gujarat Summit has become a model for economic success for many states. This event provides an opportunity to the State to display its strengths, progressive stance, initiatives taken to improve governance, investor friendly climate and art & culture of Gujarat. The event not only gives local players an opportunity to interact with national and international players, but also with top Government officials from various departments and sectors.

During the last summit in January 2009, MoUs worth $240 billion were signed. The last summit had witnessed participation from nearly 45 countries. As against the achievements of the 2009 summit, this Summit had participation from 101 Countries, with over 1400 foreign delegates. About 7,936 memorandums of understanding (MoUs) were signed for Rs. 20, 83,000 ($ 450 billion) crore at Vibrant Gujarat Summit 2011. Around 100 tie-ups with leading institutions from across the globe for exchange of knowledge were forged. Another distinct feature of this edition of the summit was the participation of large number of national and international speakers for various seminars and discussions. Over 350 speakers had participated in more than 30 seminars.

③ Institutional framework

– Gujarat Industrial Development Corporation (GIDC)

GIDC was created for securing the orderly establishment and organization of industries in industrial areas and industrial estates in the state. To fulfil its mandate, the Corporation has established 182 industrial estates, ranging from mini to mega sizes, in 25 of the 25 districts of the state. It has also developed 7 Special Economic Zones. GIDC is now establishing Special Investment Regions, PCPIR, Industrial areas and large /sector-specific estates in tune with the changing economic and industrial scenario.

- GIDC is the nodal agency of the Government of Gujarat for building the industrial backbone of the state.
- GIDC develops Industrial Estates/ Parks with quality infrastructure and utilities
- It is a 100% state Government owned statutory undertaking, set up under the Gujarat Industrial Development Act,1962
- Its objective is to identify and develop locations suited for industrial purpose- making it tailor- made for an entrepreneur's needs
- It has so far developed 182 estates on 30,500 hectares of land

– GIDC is now developing 11 Special Investment Regions to build an eco-system for investment in the state

(4) Supporting scheme of PPP Infrastructure by State Government / Authorities

① Viability Gap Funding

While the state government does not have any specific supporting scheme, support to the extent of 20% of total project cost comes under the purview of state government/ agencies under Viability Gap Funding scheme of the central government.

Note: The scheme has been discussed in detail in Chapter 1 under support mechanisms.

- State VGF:

Under the scheme of Government of India, a provision has been made that Government of India's support will be limited to tune of 20% of the cost of the Project. It is also mentioned that State Government or its agencies that owns the project may also provide additional grants out of its budget not exceeding further 20% of the total cost of the Project. GIDB being the nodal agency for PPP is responsible for the implementation of the scheme

- The PPP Project should be from one of the following sectors:

1. Roads
2. Ports and it Harbours
3. Power
4. Urban transport
5. Water Supply & Sewerage
6. Solid waste management
7. Tourism and Convention Centres
8. Infrastructure projects in the vicinity of Special Economic Zones

② Project Development SPV's

IL&FS has a project development fund by the name IIDC fund. ILFS has created three 50:50 JVs with govt of Gujarat with investment from this IIDC fund of IL&FS. A return of 20% is ploughed back into the capital as equity capital of the project SPV.

– Gujarat Industrial infrstructure Projects limited (GIIPL) - JV of GIDC & IL&FS
– Gujarat Tourism opportunities Limited (GUJTOP)- JV of Tourism corporation of Gujarat limited and IL&FS

- Gujarat International Finance Tec – City (GIFT)

- Advantages:
  - Mitigation of technical and financial risks
  - Leverage non-proponent Resources
  - Management of bottlenecks related to approvals
  - Obtain best value of project for all stakeholders
  - Minimize implementation time for a project
  - Transparent Selection Procedure and contract clauses for concession agreement
  - Capacity Building of local people

3.2.3. Current status of PPP Infrastructure in Maharashtra

(1) Overview of PPP Infrastructure

① Introduction

Maharashtra is the third largest state in terms of area and second largest in terms of population. It is one of the leading industrialized states in the country, having a strong presence in petrochemicals, automobiles, pharmaceuticals, financial services, media and entertainment, IT/ITES and textile industries. It is also one of the most urbanised states with an urbanisation ratio of 42% compared to the national average of 28% (as per 2001 census). Its network of roads is the largest in the country with total road length of over 2,67,000 Km. Maharashtra is popularly known as the economic powerhouse of India as the key financial institutions such as Bombay Stock Exchange, National Stock Exchange, and the Reserve Bank of India are all located in the state. The three largest industrial groups in India namely, the Tata Group, the AV Birla Group and Reliance have their flagship companies in Maharashtra.

Maharashtra also enjoys the largest share of the total foreign direct investment and foreign collaborations approved by the Government of India so far. Key sectors attracting healthy FDI inflows include energy, transportation, services, telecommunications and electrical equipment

The state shares borders with Gujarat, Madhya Pradesh, Chhattisgarh, Andhra Pradesh, Karnataka, Goa and the union territory of Dadra and Nagar Haveli and the Arabian Sea lying on the western coast. Mumbai, the capital city of Maharashtra, is the most populous city in Maharashtra and the Mumbai Metropolitan Region (MMR) also the sixth largest metropolitan area in the world.

② Implementation status of PPP Infrasturtucre in Maharashtra

The 11th five year plan envisages total infrastructure investment of around US $ 500 billion for a period of five years in the country of which 30% would be funded through private sector participation. The State has been working towards developing physical and social infrastructure in both urban and rural areas. Maharashtra is presently ranked second in the country for on-going PPP investments with Rs. 44,136 crores of investment as on May 31 st 2011. Maharashtra has taken pro-active measures towards the PPP approach, some of which include:

- Formation of a PPP cell under Secretary (Special Projects) as nodal officer
- Formation of Maharashtra Urban Infrastructure Fund with Rs. 47 crore as corpus

- Formation of Maharashtra Urban Infrastructure Development Corporation Limited (MUIDCL) with 51% private equity
- It has put up its own Panel of Transaction Advisors that would support the government departments and their agencies in building a pipeline of PPP Projects. State PPP nodal officer appointed as Managing Director of MUIDCL
- Director of (MUIDCL)
- PPP experts & MIS experts of ADB inducted as OSDs (Officer ON Special Duty).
- The PPP policy is under finalisation and it provides for PPP as the preferred mode for implementation for infrastructure projects

The projects taken through PPP generally fall in the following categories:

- Construction of new roads
- Improvements to existing roads
- Bypasses through towns
- Construction of flyovers, bridges, ROBs & tunnels
- Construction of expressway
- Widening & repairing of bridges
- Development of government plots through privatization
- While selecting the projects, priority is being given to the works included in road development plan and efforts are being made to maintain regional balance

The major PPP initiatives by the state have been in road sector, in which it has completed several projects successfully.

Apart from the above-mentioned type of road projects there is ongoing Dighi port, Rewas port, Jaigad port and Vijaydurg have been allotted to private developers. Estimated combined capital investment of Rs. 6,649 crores is also being developed in the State.

State run organisations like SICOM Limited and CIDCO also facilitate in providing a suitable platform for the funding and development of infrastructure and allied projects in the state enabling private sector participation.

List of PPP projects successfully undertaken and operational in the state is given below

Table 3-4 PPP Projects operational in Maharashtra

Name of the project	PPP Type	Sector	Estimated Project Cost [Rs. Crore]	Sponsoring Authority
Erection of Bus Q shelters	BOT	Municipal Infrastructure	15.12	Municipal Corporation, Bhiwandi
Construction of Modern and all Weather DhamanKhol Port at Jaigarh (Ratnagiri)	BOT	Ports	900	Mumbai Metro Regional Development Authority (MMRDA)
Bandra-Worli Sea Link	BOT	Roads	1700	PWD/Maharashtra State Road Development Corporation
Intregrated Road Development Programme, Nandurbar	BOT	Roads	33.99	PWD/Maharashtra State Road Development Corporation
Four Laning of Pune Shirpur	BOT	Roads	70	PWD/Maharashtra State Road Development Corporation
Four Laning of Nanded Warangaphaia MSH3	BOT	Roads	43.73	PWD/Maharashtra State Road Development Corporation
Four Laning of Ahemadnagar Ghodegaon Road SH 60	BOT	Roads	70	PWD/Maharashtra State Road Development Corporation
Four Laning of Mumbra Kausa Bypass Road	BOT	Roads	58.68	PWD/Maharashtra State Road Development Corporation
Four Laning of Aurangabad Wadala (SH-60) Road	BOT	Roads	190.21	PWD/Maharashtra State Road Development Corporation
Four Laning of Aurangabad Jalna (MSH-6) Road	BOT	Roads	190.07	PWD/Maharashtra State Road Development Corporation

(Source: http://www.pppinindia.com/pipelineprojects.php (as on July 2011))

Table 3-5 PPP project snapshot in Maharastra

Sector /Status	Pipeline	Bidding	Under Construction	Operational
Agriculture Marketing	2	3		
Airport	5			
Education	1		1	
Health		1		
Industries			3	
Information Technology				1
Irrigation	2			
Metro Rail	1	1	2	
Municipal Infrastructure	12	8	47	1
Ports		1	4	1
Power	1		7	
Roads	17	4	20	8
Tourism		2		
Total	41	20	84	11

(Source: http://www.pppinindia.com/pipelineprojects.php (as on July 2011)

Maharashtra has been a pioneer in undertaking municipal infrastructure projects, especially water supply projects on PPP. There are several projects here such as in Nagpur, Latur, Chandrapur, Bhiwandi, Aurangabad, Kalyan-Dombivili, etc. where water supply projects have been undertaken on PPP.

(2) Legislative/ Policy/ Institutional framework for PPP Infrastructure

① Policy framework

– Proposed PPP Policy

Maharashtra PPP policy is still under finalization. The policy covers the following sectors:

- Roads (State Highways, Major District Roads, Other District Roads, & Village Roads),ROB, RUB Bridges and Bypasses
- Urban Infrastructure:
  - City Roads including street lights
  - Urban Transport Systems, Bus Shelters, and parking solutions
  - Water Supply, treatment & distribution
  - Sewerage and Drainage
  - Solid Waste Management

    - International Convention Centers
    - Urban social infrastructure pertaining to Health care, Medical education, School & College Education etc

  - State Airports, Airstrips and Heliports
  - Ports and Harbours being developed by State Government,
  - Water Transport,
  - State Rail Transport including Metros, monorail, high speed bullet trains etc
  - Power,
  - SEZs and Infrastructure projects in SEZs,
  - Tourism,
  - Health
  - Education
  - Agriculture Production and Marketing
  - Irrigation
  - Public Buildings and Complexes etc and
  - Any other subject which the State Government wants to cover under this policy

- Salient Features of Proposed Policy:

  - Decentralised approach

    - No Infrastructure Authority Approval
    - Only facilitation from PPP cell

  - As per existing rules, all the projects costing more than Rs 25 crore necessarily be sent to Cabinet Sub-committee on Infrastructure chaired by CM
  - VGF Approval

    - Departments may approach GoI for VGF directly in case no State Support is required or keep doing with existing rules of business
    - Required to approach through State Government, in case State share of 20% is required or 40% of total VGF is required from State Government

  - VGF – to be housed in Planning Department

    - PS (Planning) is Member Secretary of Infrastructure Sub Committee

  - Project Development Fund (PDF) in PPP Cell

- Risks Disclosures in all the PPP Projects
- VfM analyses for projects
- PPP Regulator with sunset clause
- Panel of State's own Transactional Advisors in addition to GoI

– PPP Toolkits

Apart from the formal Policy, the State has taken the initiatives of the development of PPP Toolkits for six important sectors of urban infrastructure viz. Water Supply and Sanitation, Urban Transport (Bus services), Integrated City Road Development, Solid Waste Management, Urban Health and Education, with the help of the GoI, the ADB and the PPIAF.

② Institutional framework

– PPP Cell

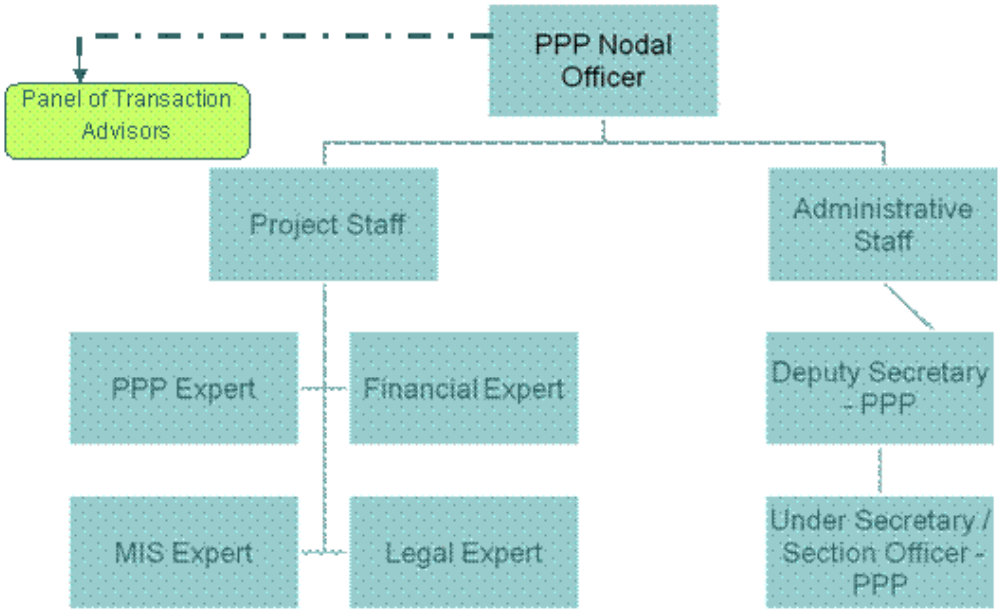

Figure 3-6 Institutional structure of PPP Cell in Maharashtra
(Source: pppinmaharashtra.com)

The PPP cell is the nodal agency for PPP in Maharashtra, which is responsible for facilitation of projects in the state. The PPP cell has a representation from ADB in the form of a PPP Expert who aids in the capacity building, Policy making and providing overall guidance to the cell. The PPP cell is responsible for coordinating with various entities including the central government and various line departments in the state government.

– Maharashtra Urban Infrastructure Development Company Limited (MUIDCL)

The Maharashtra Urban Infrastructure Fund (MUIF) is a Trust Fund set up by Government of Maharashtra and Mumbai Metropolitan Region Development Authority (MMRDA) to help the Urban Local Bodies and other agencies in developing infrastructure for promoting economic progress and improving the quality of life in the urban areas of Maharashtra. The Trustee of the MUIF is a company called Maharashtra Urban Infrastructure Fund Trustee Co. Ltd. (MUIFTCL), jointly set up by the Govt. of Maharashtra and the MMRDA. The MUIF is managed by another company called Maharashtra Urban Infrastructure Development Company Limited (MUIDCL)

- Key Objectives/Functions:

  – To carry on the business activity of developing projects for urban infrastructure, whether individually or jointly, for any municipal corporation, municipal council, Government or non-Government body, firm, corporate, trust, institution, or anby other body (whether incorporated or not) in India including Mumbai Metropolitan Region.
  – To carry on the business of conducting field surveys, technical studies, environmental studies, market demand studies, economic and financial analysis, resource mobilization plan, development of contractual framework, risk analysis and allocation whether on a standalone basis or for any infrastructure project.
  – To carry on the business of providing financial advisory services, technical consultancy services, investment management and advisory services to any municipal corporation, municipal council, Government or non-Government body, firm, corporate, trust, institution, or any other body (whether incorporated or not) in India in furtherance to the objects stated above.
  – To study and advice Government in formulating incentive schemes to attract industries, Investments.
  – To carry out market research and provide related advisory services, market survey and in depth studies and render services for the development of infrastructure projects and to take steps for creation and development of new markets.

(3) Legislative/ Policy/ Institutional framework for Industrial Development

① Policy framework

– Special Economic Zone (SEZ) Policy 2006

The State has adopted the Special Economic Zone (SEZ) policy with effect from 10th February, 2006 and is implementing the SEZs so as to boost the economic growth of the State. . The SEZs, earmarked as duty-free enclaves, have a relaxed and business friendly policy regime, aimed at promoting rapid industrial development and employment generation.

- The approved policy regime includes:

  – Exemption of all state and local taxes and levies for transactions with the SEZ and for supply from domestic tariff areas to the SEZ
  – Exemption from stamp duty and registration fees
  – Grant of labour and environment related permits and approvals through a dedicated single window mechanism
  – Permission to generate electricity for own consumption
  – Expeditious process for land acquisition to set up SEZs

The State has received 233 SEZ proposals up to 31st December, 2010. Out of these, 143 SEZ were approved by the Central Government (formal approval: 105 & in-principle approval: 38) and 63 of them are Notified SEZs.

– Industrial Investment & Infrastructure Policy 2006

The government of Maharashtra has come up with the Industrial Investment & Infrastructure Policy with an objective to achieve higher and sustainable economic growth with emphasis on balanced regional development and employment generation through greater private and public investment in industrial and infrastructure development. The policy is valid till March 31, 2011.

- Policy Targets:[19]

  – Target industrial sector growth rate of 10% by 2010
  – Target service sector growth rate of 12% by 2010
  – Additional employment generation of 20 lakh by 2010

- Key features of policy

[19] Source:http://www.midcindia.org/Lists/Policies%20Circulars%20and%20Notification/Attachments/1/Industrial_Policyrevised2006.pdf

- Institutional framework for policy implementation
- Identification of thrust sectors
- Building up of quality infrastructure
- Incentivising investments for employment generation in districts low on human development index (HDI)
- Attracting mega investments, both foreign and domestic
- Commercial exploitation of local resources and local economic potential
- Strengthening the small and medium enterprises (SME) sector through promotion of quality competitiveness, research and development and technology up-gradation
- Nurturing industrial clusters
- Prevention of industrial sickness and revival of viable sick units
- Smooth exit option for industries
- Streamlining procedures, debottlenecking and creation of hassle-free, industry-friendly environment
- Strengthening institutional support

- Incentives:

  - Industrial promotion subsidy, up to 60 per cent of the fixed capital investment, for new small, medium and large-scale units and expansion units
  - Special incentives for units coming up in districts low on HDI: this includes up to 75 per cent reimbursement of expenditure on account of Employees State Insurance and Employee Provident Fund scheme for a period of five years.
  - Customised packages of incentives for mega projects. Mega projects include industrial projects with investment of more than US$ 108.7 million or generating employment for more than 1,000 persons or investment of more than US$ 54.3 million or generating employment for more than 500 persons, depending on the location of the mega project.
  - Interest subsidy to new eligible units in textile, hosiery, knitwear and readymade garment sectors, of up to US$ 76,000 for a maximum period of seven years.
  - 100% exemption from electricity duty for export-oriented units, IT and biotechnology for a period of 15 years. This is also applicable to other eligible units, depending on their location.
  - Waiver of stamp duty: 50 to 100 per cent waiverof stamp duty depending on location and type of project.

– Five to 50 per cent subsidy on capital equipment, cleaner production measures and expenses incurred on quality certification and patent registration to SMEs

Total 20,484 industrial projects, including FDI projects with an investment of Rs. 9,20,121 crore have been approved for setting up new industries in the State during August, 1991 to August, 2010. Details of sector wise approved FDI in the state (Aug 1991 to Aug 2010)

Table 3-6 FDI Status in Maharashtra

Industrial groups	Total projects	Investment (₹ crore)
I T Industry	762	12,765
Financial Services	667	11,858
Industrial Machinery	261	771
Electrical & Electronics	212	1,467
Chemicals & Fertilizers	197	2,666
Food Processing	173	1,039
Textiles	122	1,051
Drugs & Pharmaceuticals	121	1,012
Automobile	112	895
Transportation	108	4,124
Cements & Ceramics	58	3,727
Power & Fuel	39	2,841
Paper & Paper Pulp	31	1,323
Plastic & Rubber Goods	27	767
Machine Tools / Industrial Instruments	89	717
Business Management Consultancy	369	4,962
Hotel & Tourism Industry	95	6,326
Others	732	25,468
Total	**4,175**	**83,779**

(Source Economic Survey of Maharashtra 2010-11)

② Institutional framework

– Maharashtra Industrial Development Corporation (MIDC)

MIDC was set up in 1962 with the following objectives:

– To achieve balanced industrial development of the state with an emphasis on developing parts and underdeveloped parts of the state
– To develop infrastructure of each and every district of Maharashtra
– To facilitate entrepreneurs in setting up industries at various locations

MIDC has been declared as an agent of the State Government for carrying out the activities within the framework of the MID Act and the MID Rules. These activities can be divided under following 3 broad categories.

– Acquisition and disposal of land

- Provision of infrastructure facilities
- Providing of services

(4) Supporting scheme of PPP Infrastructure by State Government / Authorities

① Maharashtra Suvarna Jayanti Nagarothan Mahabhiyan

Taking the cue from the central government's Jawaharlal Nehru National Urban Renewal Mission (JNNURM) scheme aimed at executing infrastructure projects in major cities and metros, the Maharashtra government has come up with a funding scheme, worked out on similar lines, for infrastructure projects in smaller cities in the state.

The scheme — Maharashtra Suvarna Jayanti Nagarothan Mahabhiyan — aims to support municipal bodies not falling under the JNNURM scheme. It will attempt to raise the standard of living of people in smaller cities by improving transportation, solid waste management, water supply and eliminating slums. The scheme will be implemented in class 'D' municipal corporations and main municipal councils and nagar panchayats.

② Viability Gap Funding

While the state government does not have any specific supporting scheme, support to the extent of 20% of total project cost comes under the purview of state government/ agencies under Viability Gap Funding scheme of the central government. Under the scheme of Government of India, a provision has been made that Government of India's support will be limited to tune of 20% of the cost of the Project. It is also mentioned that State Government or its agencies that owns the project may also provide additional grants out of its budget not exceeding further 20% of the total cost of the Project. GIDB being the nodal agency for PPP is responsible for the implementation of the scheme.

Note: The scheme has been discussed in detail in Chapter 1 under support mechanisms.

State VGF: The State has proposed to have its own Viability Gap Fund to support the financial viability of marginally unviable though much necessary projects.

③ Funding Schemes of MUIDCL

- Project Development Fund (PDF) Scheme

  - Developing projects including those based on PPP
  - Advising Project Implementing Agencies (PIAs) including ULBs regarding project financing and assisting them in raising funds from various sources
  - Providing loan assistance to PIAs for development of projects

- Building capacities of ULBs and PIAs
- Providing policy support to the State Government and collaborating with the State Govt. in development of urban infrastructure

- Under the PDF Scheme, the MUIDCL would help the agencies in the following tasks:

1. Preparing bankable infrastructure projects with the help of a panel of technical experts / consultants / transaction advisors etc. or providing interest free or soft loans / grants (depending on the finances of the Agency) for development of PPP-based or other types of urban infrastructure projects
2. Obtaining / arranging funds from various sources for development of PPP or Non-PPP projects
3. Facilitating access to institutional finance and / or capital market for projects and advising the agency on the activities required for improving credit-worthiness of the agency
4. Promoting private and community sector participation in projects
5. Initiating, financing and sustaining urban institutional reforms through capacity building (Training and knowledge management), efficiency improvements and demonstration projects
6. Carrying out studies and assisting the Government of Maharashtra and the State agencies in benchmarking, policy analysis, design of sector strategies, system development, model guidelines and information management
7. Providing support for policy reforms to the Government of Maharashtra.

In cases, where the MUIDCL develops projects or helps agencies in obtaining finance, the costs incurred on these activities are to be recovered from the concerned agency along with a success fee as a proportion of project development cost to be decided based on the nature of the project, subject to a ceiling of 25% of the project development cost. The interest-free or soft loans provided for project development are also to be recovered from the Agency as per the tenor and rate of interest decided by the MUIDCL in the light of the financial condition of the Agency as assessed by the MUIDCL. In case of default in the repayment towards the project development cost or success fee or towards repayment of loan and interest, the MUIDCL would request the State Govt. to intercept the grants payable by the Govt. to the concerned Agency.

- Project Finance Fund (PFF) Scheme

This fund aims at providing loan assistance for execution of PPP and Non-PPP projects Under the PFF Scheme, the MUIDCL would borrow and lend funds for priority urban infrastructure projects to the agencies, which find it difficult to

directly raise funds from the financial institutions or capital market. The MUIDCL would assist the Agencies under this Scheme as follows:

- Carrying out technical and financial appraisal of the projects and the borrowing agencies with the help of empanelled technical experts / consultants / transaction advisors etc
- Providing loan assistance in the form of Viability Gap Funding (VGF) for PPP projects
- Providing loan assistance towards substantial cost funding of Non-PPP projects

- Debt Service Reserve Fund (DSRF) Scheme

This funds has been set up to provide financial guarantees for raising loans from other agencies. Under the DSRF Scheme, the MUIDCL would provide guarantees for loans in the following manner:

1. Treasury management and appraisal of debt guarantee proposals with the help of a panel of technical experts / consultants / transaction advisors etc.
2. Reducing the cost of capital by providing financial guarantee for debt raised or providing any other form of guarantee
3. Organizing credit enhancement mechanisms, formalising, and monitoring the Borrowing Agency level mechanisms such as escrow, loan repayment fund etc.
4. Exploring and using other mechanisms to substitute or supplement direct guarantees provided under the DSRF Scheme

In cases, where the MUIDCL provides guarantees, a fixed fee in proportion to the debt guaranteed will be charged. In case of invoking of guarantee and related payment, such amount paid will be recovered along with interest. In case of default in the payment towards such guarantee payments made by the MUIDCL and the guarantee fee, the MUIDCL would request the State Govt. to intercept the grants payable by the Govt.

3.2.4. Current status of PPP Infrastructure in Karnataka

(1) Overview of PPP Infrastructure

① Introduction

The State of Karnataka had invested about Rs. 11000 Cr/ Yr (4.5% of state GDP) as on May 2010 in infrastructure and has a target of reaching Rs. 21,000 Cr/ Yr (9% of state GDP) for the next 10 years. One of India's fastest growing states, Karnataka offers numerous opportunities to the foreign investors. The state has shown an impressive growth with respect to growth in GDP and GDP per capita. Karnataka's GSDP grew at 8.2 percent in 2010-11 while India's GDP grew at 8.5% in the year. Karnataka has also been the forerunner in the field of IT/ITeS and knowledge-driven industries. Karnataka is also a home to several key infrastructure players in the country.

Key advantages:

- Proactive government
- Sector-friendly policies
- Large pool of skilled manpower
- Good infrastructure
- Focus on industrial growth

② PPP Implementation Status

State Government has shown its clear intent in developing infrastructure to lead the economic growth of the state. Karnataka has had the following developments in the past

- Formulation of the infrastructure policy in 1997 (among the first states)
- Further a PPP cell in Infrastructure development department was established in June 2007 to mainstream PPP in infrastructure sectors , assist line departments in all phases of project development by way of sector studies , projects identification and development , transaction management , project implementation monitoring , capacity building, and PPP related training
- New infrastructure Policy issued in July 2007
- State government has signed a MOU with the centre for technical assistance
- Karnataka's share in the total number of PPP projects in India is 104 out of 740 projects (i.e 14%) as on May 31 st 2011. Source: pppindiadatabase .com
- Following are some of the few examples of successful Public Private Partnership investments in the state.
- Bangalore International Airport Ltd., Devanahalli
- Four Laning of Bangalore-Mysore Road (Bangalore-Maddur Section)

– Sanitary Landfills in Bangalore
– International Technological Park Ltd.,Whitefield
– Sandur Bypass Road

Karnataka has certain gaps in sectors such as energy, roads, railways and ports. To bridge the gap, the Government of Karnataka (GoK) has initiated steps to implement infrastructure projects both through public funding and through Public Private Partnership (PPP) route. Notably in sectors like Aero infrastructure-Karnataka is expected to have 11 airports and 13 Airstrips by 2014. The state has developed a shelf of projects of 88 at a project cost of about Rs. 87,000 crore in 10 sectors under infrastructure policy 2007.

Table 3-7 PPP Project Status Snapshot (as on 09/11/2010)

Rs. Crore	Under Planning/Pipeline		Under Implementation		Completed		Total	
	Nos.	Rs. Crore	Nos.	Rs. Crore	Nos.	Rs. Crore	Nos.	Rs. Crore
Agri Infrastructure	8	855.8	-	-	-	-	8	855.8
Education	-	-	-	-	-	-	-	-
Energy	4	7,350.0	-	-	-	-	4	7,350.0
Healthcare	-	-	-	-	-	-	-	-
Industrial Infrastructure	15	24,346.0	-	-	-	-	15	24,346.0
Tourism	7	1,164.5	-	-	1	32.0	8	1,196.0
Transport & Logistics	39	29,398.6	7	1,383.3	3	3,006.3	49	33,788.2
Urban and Municipal Infrastructure	2	144.3	-	-	4	108.6	6	253.0
Total	***75***	***63,259.2***	***7***	***1,383.3***	***8***	***3,146.9***	***90***	***67,789.4***

(Source: http://idd.kar.nic.in//)

(2) Legislative/ Policy/ Institutional framework for PPP Infrastructure

① Policy framework

– Infrastructure Policy 2007[20]

The Government of Karnataka (GoK) has come out with Infrastructure Policy-2007 to provide a fair and transparent policy framework to help facilitate the process of economic growth and encourage Public-Private Partnership (PPP) in upgrading, expanding and developing infrastructure in the state. The new

[20] Source http://idd.kar.nic.in/docs/Infra_policy_07_1_17.pdf

Infrastructure Policy covers the following sectors: agri-infrastructure, education, energy, healthcare, industrial infrastructure, irrigation, public markets, tourism, transportation& logistics and urban & municipal Infrastructure.

Main principles:

- Efficient use of existing assets and optimal allocation of additional resources
- Payment for services
- Equitable contractual structures
- Transparent process of procurement
- Fair regulatory framework
- Enabling institutional frameworks
- Sustainable incentives and concessions

A key feature relating to PPP mode of execution is recognised in clause 9 of the policy which states that as far as possible for all new investments in infrastructure, the option of implementing the project through PPPs would be considered first. The state government would directly invest in a project only after satisfying itself that the same cannot be implemented through PPP. Exceptions would be projects in backward areas, or projects with high social relevance, but which are prima facie not financially viable.

The New Infrastructure Policy '07 permits two routes of procurement of PPP developer for a infrastructure project – a) through an open invitation via tender procedure b) through the 'Swiss Challenge' route

The PPP Cell, in the Infrastructure Development Department, anchors the policy. The Cell is responsible for co-ordinating and facilitating the identification, development, and implementation of infrastructure projects, including facilitation for obtaining clearances and approvals on a PPP route.

Models considered for PPPs:

- Project implementation by GoK/GoK Agency followed by a medium or long-tenure O&M contract to a private operator
- Project implementation by a Special Purpose Vehicle (SPV) set up by GoK/GoK Agency followed by divestiture to a private operator after stabilization of operations
- Project Implementation by a private developer/operator or joint ventures with GoK under a licence/concession structure

– Guidelines for Procurement of PPP projects through Swiss Challenge Route, 2010

Paragraph 29 of the Infrastructure policy 2007 has recognized the Swiss challenge mode of procurement. These guidelines are developed to operationalise para 29 of the New Infrastructure policy . Under swiss challenge mode, GOK invites a Private sector participant to submit suo- moto/ innovative proposal to GOK/ GOK agency for setting up an Infrastructure project

These guidelines applies to all proposals that fall in the following sectors and subsectors

- Agri-infrastructure (Agriculture and horticulture Markets; Floriculture parks and markets; Agro-food processing and allied infrastructure (including common-user cold storage facilities)) with minimum investment of Rs 25 crore
- Transportation & Logistics (Roads (including bridges, interchanges, and flyovers); Railway systems, Urban transport systems: MRTS, LRTS, Monorail, High-capacity bus systems, Airports and airstrips, Minor ports and harbours, Inland water transport, Bus/ Truck/ Urban Transport Terminals and associated public facilities such as Public Amenities Centres; Warehousing infrastructure (including container freight stations, container depots, cold storage facilities and tank farms); mechanised and multi-storey parking facilities) with minimum investment of Rs 500 crore
- Urban and Municipal Infrastructure (Water Supply and Sewerage; Desalination; Underground drainage; Solid waste/ Bio-medical waste/ Hazardous waste: Collection, transportation, treatment and disposal facilities) with minimum investment of Rs 50 crore
- Only those projects that do not require any financial support from the Govt., shall be considered. This means that prima facie viability gap funding would not be available for projects proposed under Swiss challenge.
- Such projects that would result in monopoly and exclusive rights shall not be considered
- The requirement of land, if any for the project would be considered for acquisition / allotment at the Market rates / KIAOB allotment rates wherever required. Under no circumstances, will land be made available at concessional rates
- A maximum of 14 months shall be made available to the project proponent from the day of clearance by the State Level Single Window Agency (SLSWA) to submit final proposals along with feasibility report and relevant documents to enable to go ahead inviting competitive bidding for Counter Proposals.

- GOK would, in the first instance, assess the public need for the infrastructure project. In case the infrastructure project is found to satisfy a public need, Gok would assess the technical feasibility / suitability of the Original Proposal and modify the same, if required. GOK may carry out additional studies for the project, if required.
- After evaluating the proposals and considering it suitable, GoK would, put up competitive bidding for counter proposals ("Swiss Challenge"). The original proposal (except proprietary information and details of financial proposal) and contract principles of the Original Proposal would be made available to any interested applicants. If competitive bidding process results in a superior proposal, the Proposal initiator would be given an opportunity to match the competing counter proposal within a stipulated time frame, and be selected as the project concessionaire if the original proposer matches the superior competing counter proposal. If the proposal initiator declines to match the superior counter proposal, then the applicant that has made the superior proposal would be selected as the concessionaire. Upon such selection, GoK/GoK Agency concerned shall cause/ arrange to reimburse to the Proposal Initiator, a part or the whole of the development costs, as determined upfront and declared in the bidding documents, and may recover the same from the successful bidder.
- Guidelines also lays down Institutional Framework for Swiss challenge projects as given below:-
- **State Level Single Window Agency (SLSWA)**: SLSWA shall examine and consider the Swiss Challenge proposals relating to any department in the state for 'permission to proceed' and give final approval/ recommendation
- **PPP cell in IDD**: This will be the nodal agency to examine proposals in respect of Swiss Challenge projects and place them before the SWA for consideration for permission to proceed and final approval
- **The Finance Department**: will be the responsible for examining concession agreements from the financial angle, deciding on guarantees to be extended, and generally assess risk allocation from the investment and banking perspectives. It would also ensure that projects are scrutinized from the perspective of government expenditure
- **The administrative department**: The Department of GoK that has jurisdiction over the affairs of the sector under which the project is proposed is the administrative department and it will be responsible for receiving proposal, undertake preliminary examination, coordinate with PPP cell for 'permission to proceed' and 'final approval', preparation of tender

documents, and undertake bidding and evaluation of proposals received till award of the project to the successful bidder

② Institutional framework

– Government of Karnataka (GoK)

Role of GoK are :

- Formulation of policy measures
- General administration of policy measures
- Coordination between various departments for facilitating project implementation
- Performance evaluation

– Infrastructure Development Department (IDD)

IDD was set up in 1996 with a view to find efficient way of sharing risk, joint financing and achieving balanced partnership between private operators and public authorities, public - private participation. It was established to play a significant role in the areas of developing air, rail and maritime connectivity for the state and in promoting increased private investment in public infrastructure through Public Private Partnership (PPP)

Roles of IDC are:

- Co-ordination of policy level initiatives
- Part of SLSWA for PPP for approval of private investment proposals up to Rs. 50 Crore
- Part of High-Level Committee (HLC) for Infrastructure Projects over Rs. 50 Crore
- Assistance to HLC and SWA for evaluation of all Infrastructure
- Project proposals to be implemented through PPP
- Co-ordination of project development

– State High Level Committee (SHLC):

For all proposals in excess of Rs. 50 Crores, SWA for PPP will scrutinize the proposals and make its recommendations to the High Level Committee, headed by the Chief Minister, for approval. The IDD, as the nodal department for PPP, with support from iDeCK, assists the concerned departments in the evaluation of all such projects. The IDD shall also assist the SWA for PPP and HLC in evaluating and deciding upon specific proposals.

– Single Window Agency (SWA):

SWA has been set up at the State Level under the Chairmanship of the Chief Secretary to approve the projects under PPP projects upto Rs. 50 Crores, and to recommend the projects above Rs. 50 Crores to the State High Level Committee under the Chairmanship of the Chief Minister constituted under Section 3 of the Karnataka Industries (Facilitation) Act 2002. In the case of all PPP proposals upto Rs. 50 Crore, the concerned department in consultation with IDD place them before the Single Window Agency for PPP headed by the Chief Secretary for approval.

– PPP Cell[21]

The Government of Karnataka (GoK) has set up a "PPP Cell" in the Infrastructure Development Department (IDD), which is headed by the Principal Secretary – IDD. The cell coordinates and facilitates the identification, development and implementation of infrastructure projects, including facilitation for obtaining clearances and approvals on a PPP route. The PPP Cell is the nodal agency to receive proposals in respect of Public Private Partnership (PPP) projects and place them before the SWA for consideration and approval. The PPP Cell also helps various state Departments/Agencies in different stages of project development cycle. iDeCK(a JV of Govt of Karnataka and IDFC) provides technical advice and support to PPP Cell. The PPP Cell engages consultants as and when necessary.

The Functions of the PPP Cell are as follows:-

- To identify, conceptualize and create a shelf of projects in consultation with the line departments and recommend approval of suitable projects for implementation on PPP route
- To assist different government departments in preparing the pre-feasibility reports through consultants
- To assist the respective departments in preparing the detailed project reports.
- To appoint / select consultants to develop the projects in consultation with the concerned department
- To help respective departments to conduct the bidding process for selection of developers
- To interact with the Government of India and other funding agencies for obtaining their support

[21] Source http://www.idd.kar.nic.in/docs/go.pdf

- To act as the nodal agency for capacity building for PPP in the state, conduct/recommend exposure visits and training programmes on PPP.
- To develop internal evaluation guidelines in consultation with the respective departments to evaluate and assess the projects whether the projects are to be funded by the state government, or implemented with private sector participation.
- To recommend projects to Government of India for grants under Viability Gap Funding Scheme
- To inspect, visit, review and monitor any PPP Project under implementation in the State.

- District PPP Committee:

GoK has set up a District PPP Committee at the District level, to co-ordinate and facilitate the implementation of infrastructure projects, including facilitation for obtaining clearances and approvals on a PPP route. The District PPP Committee is chaired by the Deputy Commissioner of the concerned district.

- iDeCK

Infrastructure Development Corporation Karnataka Limited (iDeCK) was set up as a joint venture between the Government of Karnataka (GoK), infrastructure Development Finance Company Ltd. (IDFC) and the Housing Development Finance Corporation Ltd.(HDFC). It is responsible for developing sectoral policies and development strategies for various infrastructure sectors, render assistance in project selection, development and implementation and manage GoK funds earmarked for project development activities and making direct investments of debt and equity in projects.

Role of IDeCK are:

- Secretariat / advisor to IDD / SWA/HLC
- Coordination of policy level initiatives-preparation of sect oral strategies and action plan for successful project implementation
- Administering Training and skill development programmes
- Coordination of project development for PPP projects
- Project financing
- Interface between government and private sector/ industry

- Karnataka Urban Infrastructure Development & Finance Corporation (KUIDFC)- State Level Nodal Agency for the Pooled Finance Development Facility (PFDF)

The company is a State Level Financial Institution (SLFI) having two key

functions namely project development and financing. The SLFI is proposed to take on key roles of a facilitator and co-ordinator, concentrating on development of Urban Infrastructure Financial Market. In line with this objective it is also planned to initially concentrate on developing ULB capacities and identification and development of Bankable projects.

- Key Attributes of KUIDFC:

  – Project formulation, management, implementation and appraisal
  – Infrastructure financing
  – Procedures followed by external lending agencies
  – Facilitating government policy-making and implementing reforms in the urban sector
  – Capacity building of urban local bodies (ULBs)

(3) Legislative/ Policy/ Institutional framework for Industrial Development

① Institutional framework

– Karnataka Industrial Development Board (KIADB)

KIADB is a wholly owned infrastructure agency of Government of Karnataka, set up under Karnataka Industrial Areas Development Act of 1966. The Board functions as per statutory provisions, rules and regulations enacted there under. The Board comprises of senior government officers in their ex-officio capacities.

Key objectives:

– Promote rapid and orderly development of industries in the state
– Assist in implementation of policies of government within the purview of KIAD Act
– Facilitate for establishing infrastructure projects
– Function on corporate lines, with “No Profit – No Loss” policy

Key functions:

– Acquire land and form industrial areas
– Provide all infrastructure to such industrial areas
– Acquire land for Single Unit Complexes
– Acquire land for Government agencies for their schemes and infrastructure projects

– Karnataka State Industrial & Infrastructure Development Corporation Limited (KSIIDC)

KSIIDC was established in 1964 for aiding the industrialization process for the state. KSIIDC has assisted 135 start up ventures through equity participation to the extent of Rs. 118.28 crore spread over the length and breadth of the State. It has also extended financial assistance in the form of debt to core sector industries like steel, cement, mining and textiles, modern sector industries like information technology, aviation, telecommunication and other infrastructure projects to the extent of around Rs. 2223 crore. KSIIDC has been instrumental in establishing Jindal Vijayanagar Limited (presently JSW Limited), Vikrant Tyres Limited, Karnataka Antibiotics and Pharmaceuticals Limited, to name a few. GoK through KSIIDC is initiating the concessioning process for the High Speed Rail Link to Bangalore International Airport on BOT basis.

(4) Supporting scheme of PPP Infrastructure by State Government / Authorities

① Viability Gap Funding

While the state government does not have any specific supporting scheme, support to the extent of 20% of total project cost comes under the purview of state government/ agencies under Viability Gap Funding scheme of the central government. Under the scheme of Government of India, a provision has been made that Government of India's support will be limited to tune of 20% of the cost of the Project. It is also mentioned that State Government or its agencies that owns the project may also provide additional grants out of its budget not exceeding further 20% of the total cost of the Project. GIDB being the nodal agency for PPP is responsible for the implementation of the scheme.

Note: The scheme has been discussed in detail in Chapter 1 under support mechanisms.

② Karnataka Infrastructure Project Development Fund (KIPDF)

The Karnataka Government has recently set up a fund in April2011 for providing financial assistance to state agencies taking up infrastructure projects under the PPP model. The fund is called the Karnataka Infrastructure Project Development Fund (KIPDF) and has been created under the department of infrastructure. The fund will provide assistance for project development activities. To begin with, the fund will have a corpus of around Rs 5 crore. The KIPDF's primary objective will be to fund potential PPP projects' project development expenses, including costs of engaging consultants and transaction advisors, thus increasing the quality and quantity of successful PPPs and allowing informed decision making by government. The KIPDF will assist

projects that closely support the best practices in PPP project identification and preparation.

Presently, the focus areas for investment are the Railways, airports, ports, roads, urban infrastructure, energy, tourism and industrial infrastructure.

③ Karnataka Water and Sanitation Pooled Fund:

In 2005, the Government of Karnataka used the concept of pooled financing to raise debt from investors for the Greater Bangalore Water Supply and Sewerage Project. This project covered eight municipal towns aroundBangalore and has a total project cost of Rs.6, 000 million. A debt fund called the Karnataka Water and Sanitation Pooled Fund (KWSPF) was established to access the capital market by issuing a bond on behalf of the participating ULBs. The KWSPF was created as the intermediary between the local municipalities and the capital market. The KWSPF borrowed from the market and lent to the ULBs at terms determined by theKWSPF. During June 2005, the KWSPF successfully floated Rs.1,000 million tax-free municipal bonds at anannual interest rate of 5.95 percent. The tax-free status of the bonds greatly enhanced the terms on which the ULBs were to repay the loans, which in turn elevated the confidence of the investors. USAID under its DCA program provided a guarantee of up to 50 percent of the principal amount of market borrowing.

④ Other incentives

The state government offers incentives and concessions under the infrastructure policy like

- Facilitation for obtaining land clearances & approvals and utilities
- Asset based support by providing Government land , subject to availability , at concessional rates to allow private investors to acquire additional land for commercial activities to support the main project to develop linkages infrastructure for projects that need critical linkages
- Contingent guarantees: In specific cases, guaranteed payment structures such as “take-or pay ”(wherein there is an assurance of payment for the availability of a service) or “supply- or pay” (wherein there is an assurance of payment for the non availability of a service) would be considered
- Financial support of viability gap finance from the central govt ; additional VGF from GoK as per the provisions of policy
- Foregoing revenue streams accruing to govt viz entry tax and special entry tax concession on stamp duty on transfer of land , concession on conversion fine on land

The state government package of incentives and concessions for new industrial

investments include

- 75% to 100% stamp duty exemption on land sale deeds and loan documents registration
- Land conversion fine reimbursement of 75% to 100% for converting agricultural land to industrial use
- 100% exemption on Entry Tax on plant and machinery for 3 years during implementation of the project
- 100% 5 year exemption on entry tax on raw materials , inputs , components etc . during operation period
- One time capital subsidy up to 50% of the cost of ETP, subject to a ceiling of Rs. 1 crore per unit for all categories of industries for all zones
- Interest free loan to an extent of 50% of the value of fixed assets at 25% of the assessed gross VAT for a period of77 years extendable to 12 years
- As state policy for special economic zone formulated as per the Central SEZ Act 2005& Rules 2006, with a view to provide a hassle free environment for export production and attract FDI. The objective of the policy are to set up a single point clearance to SEZ developers and units , to facilitate and expedite establishing SEZs, to delegate the powers of the Labour Commissioner to the development commissioner of SEZs and to extend the incentives as below

    - Exemption from state taxes for all purchase from Domestic Tariff Area
    - Exemption of from stamp duty
    - Exemption from Electricity Duty
    - Capital subsidy for common effluent treatment plant (maximum of rs 1 crore per SEZ)

3.2.5. Current status of PPP Infrastructure in Tamil Nadu

(1) Overview of PPP Infrastructure

① Introduction

Tamil Nadu is one of the most industrialised states in the country. In terms of contribution of the manufacturing sector to the net state domestic product, the state ranks next only to Maharashtra. Primary sectors consisting of agriculture and other allied activities have witnessed maximum growth and the IT and ITES sectors have also significantly contributed to the state's economy. The state has been drawing huge investments both from domestic as well as overseas market. It has a strong manufacturing infrastructure that has helped to attract investors. The infrastructure is especially strong in the textile and automobile sector. The state has been making steady progress and performing well on the industrial front. Its literacy rate is one of the highest in the country.

- To position Tamil Nadu as the most attractive investment destination
- To facilitate industry to capture a larger share of world trade in goods/services
- To reform regulatory processes and remove procedural hurdles in business
- To enable integration of existing industrial clusters with global supply chains
- To build efficient and dependable industrial infrastructure
- To develop human resources and intellectual capital to world standards
- To encourage symbiosis with SMEs in major industry clusters

The town of Tiruppur in the Coimbatore district is the largest garment-exporting cluster in India. Several international players from the automobile industry have made Tamil Nadu as their base for manufacturing. Hyundai and Ford already have their manufacturing units in Tamil Nadu while others such as BMW and Nissan are in the process of establishing units. A sizable number of companies engaged in the manufacture of electronic goods such as Nokia, Flextronics, Motorola, Foxconn and Dell have chosen Chennai as their South Asian manufacturing hub.

② Implementation status of PPP Inrastructure projects by sectors

Government of Tamil Nadu has been in the forefront of developing infrastructure projects through public private partnerships. A number of special purpose vehicles have been set up to deliver and implement specific projects. While the state does not have a consolidated PPP Policy yet, it has taken

concrete steps in promoting PPP's by setting up dedicated organizations and bringing in supporting funding mechanisms.

Table 3-8 PPP Project Snapshot

Sectors	Pipeline		Under Construction		Operational		Total	
	Nos	Value (Rs crore)	Nos	Value (Rs crore)	Nos	Value (Rs crore)	Nos	Value (Rs crore)
Road	1	1500	2	1471			3	2971
SEZ	1	600	4	6862			5	7462
Ports			1	89			1	89
Water & Sanitation	2	1100	3	1005	2	1091	7	3196
Agriculture	1	200					1	200
Housing	6	844					6	844
Health	1	26					1	26
Energy	1						1	0
Land Development	1	18					1	18
Transport	1	9			3	190	4	199
Urban infrastructure	2	205					2	205
Solid Waste Management	1	70	4	163	2	10	7	243
Bus Terminals	1	475					1	475
Total	19	5047*	14	9590	7	1291	40	15928

(Source: www.pppinindia.com (updated as on July 2011))

Some of the successful projects executed with private sector participation include:

- Alandur sewerage project
- East-Coast Highway Project on road upgrading, operation and maintenance
- Tirupur Water Supply Scheme
- Chennai desalination project (the first large scale desalination project in the country)

(2) Legislative/ Policy/ Institutional framework for PPP Infrastructure

① Institutional framework

– Tamil Nadu Urban Infrastructure Financial Services Limited (TNUIFSL)

TNUIFSL, incorporated in 1996 is a public private partnership in the urban

sector, between Government of Tamil Nadu and three all India-financial-institutions namely, ICICI Bank Limited, Housing Development Finance Corporation Limited (HDFC) and Infrastructure Leasing and Financial Services Limited (IL&FS). TNUIFSL develops projects for urban sector on PPP. It manages the Tamil Nadu Urban Development Fund, which channelizes private capital to Urban Local Bodies. TN is first state to successfully implement the scheme of financial intermediation for ULBs. The bonds raised by Tamil Nadu Urban Development Fund (TUNDF) is passed on as soft loan to local bodies by blending them with grants after through financial due diligence of the capacity of the ULB to pay back the loan. This has enabled ULBs to access funds from the capital market which they would have been unable to raise due to small size of their individual requirements and high transaction costs. This has also inculcated enormous financial discipline into ULBs

(3) Legislative/ Policy/ Institutional framework for Industrial Development

① Policy framework

- Industrial Policy 2007

Source: http://www.tidco.com/images/industrialpolicy_e_2007.pdf

The following are the key objectives of the Industrial Policy:

- To position Tamil Nadu as the most attractive investment destination
- To facilitate industry to capture a larger share of world trade in goods/services
- To reform regulatory processes and remove procedural hurdles in business
- To enable integration of existing industrial clusters with global supply chains
- To build efficient and dependable industrial infrastructure
- To develop human resources and intellectual capital to world standards
- To encourage symbiosis with SMEs in major industry clusters

Through the policy, the Government is taking up steps to upgrade infrastructure facilities in all industrial clusters including water supply, power, communication facilities, roads, railways, etc. in order to improve the competitiveness of industry. Public-Private Partnership route is being used by TIDCO to bring in private investment in road, industrial park and SEZ development. State Industries Promotion Corporation of Tamil Nadu Ltd (SIPCOT) will also use this model for water supply projects and development of

other infrastructure.

– SEZ Policy 2003

The government has laid down guidelines regarding the Special Economic Zones (SEZs) in its policy as per which the state envisages to provide legislative support to the SEZs. It also aims to ensure that the supply of power and water to these SEZs is adequate and that single window clearance system is implemented with respect to all the SEZ units. Nokia Telecom SEZ is one of the first SEZs in the country to be fully operational. It adopts environmentally friendly practice of zero discharge approach.

Please refer to the following link for Policy Document:http://www.tea-india.org/Contents

/PolicyDocuments/Tamil%20Nadu-%20Special%20Economic%20Zones%20Policy.pdf

② Institutional framework

The Government of Tamil Nadu has established a single window system to avoid procedural delays and accord all pre-project clearances at the state government level. However, there is no supporting legislation for the system. The following two-tier single window system has been constituted:

– Project Approvals Authority (PAA)

Project Approvals Authority (PAA) under the chairmanship of the Chief Secretary of government to monitor and hasten projects with investment less than USD 20 million.

– State level Investment Promotion Board (SIPB)

State level Investment Promotion Board (SIPB) under the chairmanship of the Chief Minister to monitor and expedite all mega projects exceeding investment of USD 20 million. Both the SIPB and PAA have been set up to accord composite and in-principle clearance to expedite the implementation of projects.

– Tamil Nadu Industrial Guidance & Export Promotion Bureau

Tamil Nadu Industrial Guidance & Export Promotion Bureau- The government has constituted the Tamil Nadu Industrial Guidance & Export

Promotion Bureau (Guidance Bureau) as the nodal agency for investment promotion with an objective of attracting major investment proposals. The functions of bureau include providing comprehensive information to investors, and extending guidance and support to them. The bureau functions as single window documentation and clearance centre for major investment proposals and assists investors in getting all pre-project clearance.

– Tamil Nadu Industrial Development Corporation Limited (TIDCO)

TIDCO, a Government of Tamil Nadu Enterprise, was incorporated as a limited company in the year 1965 in order to identify and promote the establishment of large and medium scale industries within the state of Tamil Nadu in association with the private sector. The company's authorized share capital is Rs.125.0 crore of which Rs.72.0 crore has been issued and has been entirely subscribed by the Government of Tamil Nadu. The Government of Tamil Nadu has also extended loan assistance aggregating of about Rs.236.87 crore as at March, 31st 2011 to the company. TIDCO is registered with the Reserve Bank of India as Non-Banking Financial Company. With liberalisation of industrial licensing and controls, TIDCO's focus has now shifted towards promoting infrastructure projects. TIDCO has also supported ventures through venture capital funds set up in association with other financial institutions. It is also promoting industrial parks and SEZs.

– State Industries Promotion Corporation of Tamil Nadu Ltd. (SIPCOT)

SIPCOT was established in 1971, originally as a term loan lending organisation for large and medium industries. However, with changing times, term loan activities of SIPCOT have been transferred to Tamil Nadu Industrial Investment Corporation Ltd (TIIC). SIPCOT is now primarily concentrating on developing, marketing and maintaining industrial complexes/parks and growth centres and implementing Infrastructure Development Schemes

(4) Supporting scheme of PPP Infrastructure by State Government / Authorities

① Viability Gap Funding

While the state government does not have any specific supporting scheme, support to the extent of 20% of total project cost comes under the purview of state government/ agencies under Viability Gap Funding scheme of the central government. Under the scheme of Government of India, a provision has been

made that Government of India's support will be limited to tune of 20% of the cost of the Project. It is also mentioned that State Government or its agencies that owns the project may also provide additional grants out of its budget not exceeding further 20% of the total cost of the Project. GIDB being the nodal agency for PPP is responsible for the implementation of the scheme.

Note: The scheme has been discussed in detail in Chapter 1 under support mechanisms.

To encourage private sector to set up effluent treatment plants / Waste disposal sites, the Government provides a critical infrastructure subsidy of 25% of capital cost up to a maximum of Rs.2.5 million

② Tamil Nadu Urban Development Fund (TNUDF)

TNUDF was established on November 29, 1996, as a trust under The Indian Trust Act 1882. for development of urban infrastructure in the state of Tamil Nadu. TNUDF was formed by conversion of Municipal Urban Development Fund (MUDF), with contribution from Government of Tamil Nadu along with all India financial institutions viz., ICICI Bank Limited (formerly ICICI Ltd), Housing Development Finance Corporation Limited and Infrastructure Leasing and Financial Services Limited. TNUDF is the first public-private partnership providing long-term debt for civic infrastructure on a non-guarantee mode. TNUDF is managed by a Corporate Trustee viz., Tamil Nadu Urban Infrastructure Trustee Company Limited (TNUITCL). The Board of Trustees periodically review the lending policies and procedures. Tamil Nadu Urban Infrastructure Financial Services Limited (TNUIFSL) is the fund manager of TNUDF.

- Fund Objectives:
  - Fund Urban Infrastructure projects, which improve the living standards of the urban population
  - Facilitate private sector participation in infrastructure through joint venture and public-private partnership
  - Operate a complementary window, the grant und, to assist in addressing the problems of the urban poor
  - Improve the financial management of urban local bodies enabling them to access debt finance from markets

- Eligible Borrowers

  – Urban Local bodies (Corporations, Municipalities & Town Panchayats)
  – Any Private Institutions who creates urban infrastructures

Source (http://www.tnudf.com/tnudf.asp)

③ Water and Sanitation Pooled Fund (WSPF)

WSPF was incorporated as a trust in August 2002 with a six-member Board of Trustees consisting of state officials and TNUIFSL's CEO and with an initial debt service reserve contribution from the state. USAID provided a backup guarantee through its Development Credit Authority (DCA). TNUIFSL manages the fund. The purpose of the trust, WSPF, is to channel financial resources including financing raised from private markets into high priority infrastructure investments, contributing directly to improved living standards of the urban population. It will finance and refinance water and sanitation projects of small and mid-sized towns. This fund was set up to enable local bodies to participate in the capital market without increasing the contingent liabilities of the state.

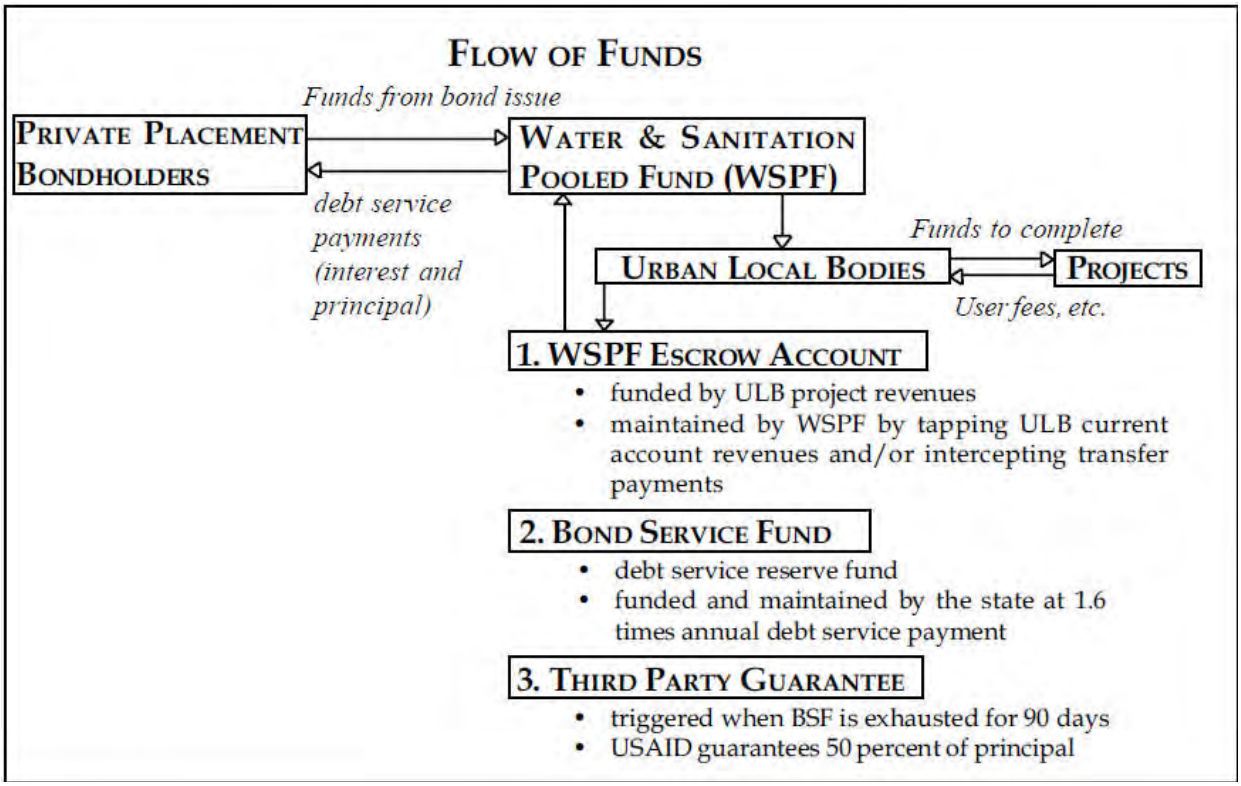

Figure 3-7 The overview of WSPF Scheme
(Source: http://pdf.usaid.gov/pdf_docs/PNACT334.pdf)

3.2.6. Current status of PPP Infrastructure in Haryana

(1) Overview of PPP Infrastructure

① Introduction

Strong economic growth, one of the highest per capita income index, sound industrial infrastructure, strong manufacturing base, advanced agricultural sector and vibrant service sector have made Haryana as one of the highly economically developed and industrialised states of India. The State has impressive infrastructure facilities in terms of road and rail network, well-developed industrial estates, good banking facilities, reliable communication network, modern technical institutes and developed commercial markets.

Haryana State has always given high priority to the expansion of electricity infrastructure, as it is one of most important inputs for the development of the State. Haryana was the first State in the country to achieve 100% rural electrification in 1970. Haryana has the highest number of Special Economic Zones (SEZs) in the country (65); out of which 8 are notified, 29 have got formal approval and 28 have got in-principle approvals

It is recognized as one of the prominent investment destinations in the country. The State has been able to attract sizable investment from multinational companies, large business houses, foreign investors, non-resident Indians and small scale entrepreneurs.

Key sectors in the state include automobiles and auto components, textiles and read made garments, Information Technology (IT) and Information Technology Enabled Services (ITES). It is the chief producer of automobiles and its various components. It accounts for almost 50 percent in the total manufacturing of passenger cars.

- The key focus areas in Haryana include:

Government of Haryana encourages private sector investment in the Roads and highways for up-gradation of roads, construction of ROB and BOT basis including four lane ROB. Lately Government of Haryana is planning to follow PPP projects to improve education and setting up of schools on PPP mode. The model schools will provide education to about two lakh students, out of which some one-lakh students will be from socially and economically disadvantaged sections of the society. State government is also planning warehouses at Kurukshetra, Bhiwani, Faridabad, Palwal, Hisar, Adampur and Kaithal on PPP mode. The warehouses will be developed under the PPP mode under the aegis of the central government scheme called the private entrepreneur guarantee

scheme.

Haryana government has also plans to implement some of the tourism projects through the Public Private Partnership (PPP) model. The projects to be implemented under this model include integrated tourism resort at Kalesar, integrated tourism resort and spa at Mallah, Madhogarh, amusement, theme parks at Karna Lake and Kurukshetra (Pipli), amusement park at Tilyar Lake, Rohtak and adventure camping sites at Surajkund, Damdama, Hodal and Dharuhera

Some of the other priority focus areas are

- Bus Stands
- Industrial & Technology Parks, SEZs, Nano City
- Technical Institutions
- Solid Waste Management
- Vikalp, Janani Suvidha Yojana (Health Care Projects)
- Aero Clubs

② Implementation status of PPP Infrasturtucre in Haryana

Owing to its location and resource attractiveness, Haryana has been conducive to private investment in infrastructure sector. The state has a PPP cell in place to facilitate private investment. Moreover, it has put in place a PPP policy to provide a clear framework for PPP projects.

Table 3-9 PPP Project Snapshot in Haryana

Scetor	Operational		Pipeline		Under Construction		Total	
	Rs. Crore	Nos	Rs. Crore	Nos	Rs. Crore	Nos	Rs. Crore	Nos
Agriculture			372.1	18			372.1	18
Civil Aviation			0.0	2			0.0	2
Education			150.0	1	125.8	5	275.8	6
Energy			381.6	1			381.6	1
Information Technology					18.0	1	18.0	1
Metro Rail					900.0	1	900.0	1
Roads	46.9	3	1373.7	2	180.0	1	1600.6	6
Transport			0.0	1			0.0	1
Urban Development	68.0	3			6000.0	1	6068.0	4
Urban Transport			100.0	2			100.0	2
Industrial					56639.5	8	56639.5	8
Urban					51.3	2	51.3	2
Tourism			100.0	8	0.0	1	100.0	9
Grand Total	114.9	6	2477.4	35	63914.6	20	66506.9	61

(Source: www.pppinindia.com (site last updated in July 2011))

(2) Legislative/ Policy/ Institutional framework for PPP Infrastructure

① Policy framework

– PPP Policy[22]

In order to facilitate and promote increasing role of Public Private Partnership in creation of new infrastructure assets as well as for the management of existing ones the Government of Haryana has laid down an explicit and comprehensive PPP policy. The primary objective is to create an enabling environment and to facilitate private sector participation in upgrading, developing and expanding the physical and social infrastructure in the State of Haryana.

- Key Objectives:

  – To provide a broad framework and a conducive environment
  – To put in position a transparent, consistent, efficient administrative mechanism, to create a level playing field for all stakeholders

[22] Source: http://haryana.gov.in/government%20Policies/PPP-Policy-Haryana.pdf

- To prepare a shelf of projects to be offered for PPP and take them forward in coordination with owner Departments through a transparent selection process
- To provide project development funding and/or seek available assistance from Government of India for funding essential infrastructure projects
- To make assessment of the Value for Money (VfM) especially for major projects with exception for projects in backward areas or projects with social requirements, which prime facie, may not be financially viable on PPP
- To create a robust dispute redressal mechanism/regulatory framework for PPP projects
- To provide the required Viability Gap Funding (VGF) where the essential projects are intrinsically unviable
- To create "Haryana Infrastructure Fund (HIF)" to facilitate implementation of the objectives of the Policy

- The infrastructure sectors in the ambit of this policy include the following:

  - Healthcare Facilities
  - Education
  - Tourism & related projects - Hotels , adventure and theme parks, trade fairs , convention centres, exhibition / cultural centres
  - Urban Infrastructure - Urban roads, water supply, solid waste management, sewerage, sanitation
  - Power - Generation, transmission and distribution of power
  - Highways - Construction of expressways. missing links, bypasses, ring roads, bridges, road over bridges and improvement of roads
  - Agriculture related projects
  - Road Transport System- Improvement of Public Transport Facilities including construction of bus terminals, truck terminals, inland dry port
  - Civil Aviation – Pilot training institutes, aircraft maintenance facilities, aviation hubs
  - Industrial Infrastructure - Industrial parks, Special Economic Zones (SEZs),industrial estates and townships
  - Sports – Stadia, facilities
  - Rural - Public conveniences
  - E-governance

- Institutional Framework under the policy:

Cabinet Committee on Infrastructure (CCI): The projects under PPP mode having concession period of more than 10 years and / or involving investment of

more than Rs. 25 crore, shall be considered by the Cabinet Committee on Infrastructure and approved on the basis of recommendations of the Committee of Secretaries on Infrastructure (CoSI).

A Committee of Secretaries on Infrastructure (CoSI), consisting of a group of Secretaries under the Chairmanship of the Chief Secretary, Government of Haryana for facilitating infrastructure development in the State under PPP would be set up. The other members of CoSI would be Principal Secretary to CM, Administrative

Secretaries of Finance & Planning, Revenue, Law & Justice, Town & Country Planning, Industries, Building & Roads, Forest and the concerned Department. Principal Secretary, Finance would be the convener of this Committee. The Chairman of CoSI may co-opt / invite any other officer / expert to be a member of CoSl and/ or to participate in its meeting. The powers and functions of CoSI would be:-

- to consider and formulate policy directives for facilitation and acceleration of PPP mode of delivery of public services in the State
- to consider and provide in principle approval for project to be taken up on PPP
- to determine most preferred and optimal method, based on the detailed analysis presented on alternatives for procuring the public services / utilities.

② Institutional framework

– PPP Cell under Finance Department: Nodal Agency for PPP's

A PPP Cell was created in the Finance Department. The Department of Economic Affairs (DEA), Government of India (GoI) has provided two experts Expert under the Technical Assistance (TA) programme of Asian Development Bank. The objective of the TA programme is to support the Government in mainstreaming PPPs at the central and state levels through capacity enhancement/development as required. It also supports effective institutionalization of the PPP Cells to deliver their mandat.

- Objectives of the PPP Cell:

  - Serve as the repository of knowledge and information relating to PPP including best practices, guidelines, schemes etc.
  - Identify and prioritize sectors and sub sectors for PPP projects and seek in principle approvals if required.

- Undertake studies through competent consultants, for identification of possible projects on PPP, in various physical and social infrastructure sectors
- Identify, conceptualize, suggest and create shelf of projects for PPP, either itself or assist the owner department / agency in their exercise
- Assist various Government Departments in preparation of feasibility / project report by themselves or through consultant
- Standardise procedures and bid documents
- Advise, if required, Departments in their recommendations of final bids of the projects for approval of the CoSI, keeping in view the considerations of Public Sector Comparator (PSC) and Value for Money (VfM)
- Coordinate with GoI and line Departments of the State on all issues related to private investment in the infrastructure sectors, including PPP. Relevant Departments/Ministries in the State will coordinate with PPP Cell at all stages of project and the PPP Cell would keep itself informed of the status of the PPP proposals
- Assess fund requirements for the development of projects, Viability Gap Funding (VGF) and any other related purpose for furthering the objectives of this policy
- Organize trainings, workshops, seminar and conduct / recommend exposure visits for capacity building

(3) Legislative/ Policy/ Institutional framework for Industrial Development

① Policy framework

- Industrial & Investment Policy 2011[23]

Haryana has come out with a new industrial policy to achieve the following objectives:

- Higher, sustainable and inclusive economic growth by attracting investments in a focused and structured manner in potential areas
- Promote private sector investment through Public Private Partnerships
- Employment generation and enhanced employability through skill development
- Continued thrust on manufacturing sector as a key driver of economic growth
- Generation of entrepreneurial opportunities across all sectors of the economy

[23] Source http://hsiidc.org/eDocuments/IP2011.pdf

- Facilitation of spatial dispersal of economic activities particularly in industrially lesser developed regions of the State
- Sustainable development by adopting environment friendly technologies

State government encourages private sector participation in infrastructure projects under PPP especially in industrial infrastructure , power, roads & bridges, health , tourism, education sectors, simplification of rules and procedures, self certification and use of information & Communication Technology (ICT) for hassle free , timely delivery of services and further liberalisation of estate management procedures to achieve the objectives of the policy

PPP is one of the thrust areas of the new industrial policy. Chapter 7 of the Policy deals with PPPs in Industrial infrastructure while Chapter 8 of the policy provides for facilitation by government for acquisition of land for SEZs , Technology Cities, Industrial parks , Industrial model townships .

As per the policy, the PPP model is proposed to be implemented for the following

- Development and Marketing of independent Industrial estates by the Private sector in industrially backward regions / blocks outside the controlled areas where the government can acquire land with minimal resistance from the landowners
- Construction of Industrial worker housing facilities within the HSIIDC's industrial estate/ IMTs
- Managed Services in the HSIIDC/ HUDA developed industrial estates

② Institutional framework

– Haryana State Industrial and Infrastructure Development Corporation (HSIIDC)

HSIIDC was setup in 1967 as a wholly owned subsidiary for promoting medium and large scale industries to ensure balanced regional development of Haryana, by acting as an institutional entrepreneur and a financial institution. State government has designated HSIIDC as the nodal agency for the DMICDC projects in Haryana.

- HSIIDC serves the following functions:

  - Providing financial assistance by way of term loans, equipment re-finance/equipment leasing and working capital
  - Infrastructure development in the State of Haryana
  - Agency functions on behalf of the State Government/ IDBI/SIDBI

– Agency functions for entrepreneurs and established industries for http://hsiidc.org/abouthsidc.htmenhancement of capacity/modernisation

64 projects have been successfully set up in the Public/Joint/Assisted sectors, with an equity participation of Rs.38.88 crore, catalyzing an investment of Rs. 795.25 crore, in the State of Haryana. HSIIDC has so far sanctioned loans aggregating Rs.1293 crore against 1055 proposals up to 31.03.2005. 39 industrial estates have been developed epitomizing HSIIDC's commitment to galvanize industrialization. 66360 jobs have been created through HSIIDC-assisted projects.

(4) Supporting scheme of PPP Infrastructure by State Government / Authorities

① Viability Gap Funding

While the state government does not have any specific supporting scheme, support to the extent of 20% of total project cost comes under the purview of state government/ agencies under Viability Gap Funding scheme of the central government. Under the scheme of Government of India, a provision has been made that Government of India's support will be limited to tune of 20% of the cost of the Project. It is also mentioned that State Government or its agencies that owns the project may also provide additional grants out of its budget not exceeding further 20% of the total cost of the Project.

Note: The scheme has been discussed in detail in Chapter 1 under support mechanisms.

3.2.7. Current status of PPP Infrastructure in DMIC area

(1) Overview of PPP Infrastructure

① Introduction

– Dedicated Freight Corridor:

A freight corridor between between Delhi and Mumbai, covering an overall length of 1483 km and passing through the six States - U.P, NCR of Delhi, Haryana, Rajasthan, Gujarat and Maharashtra, with end terminals at Dadri in the National Capital Region of Delhi and Jawaharlal Nehru Port near Mumbai.

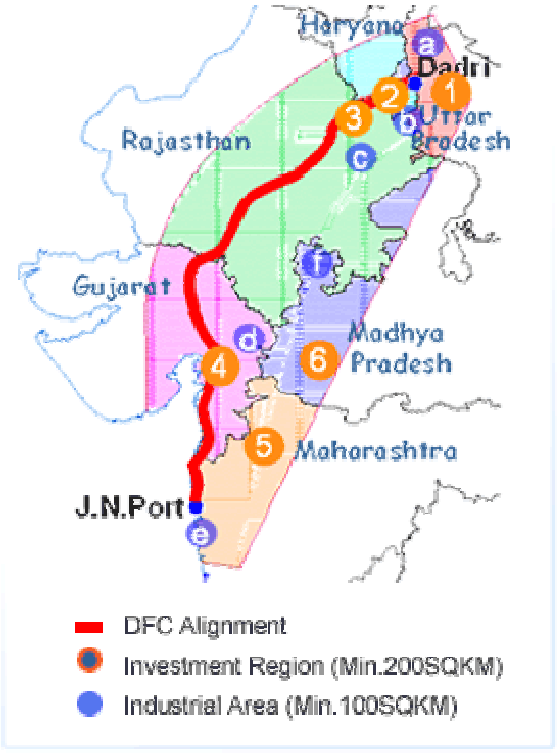

Figure 3-8 Mastermap of DMIC project
(Source: DMICDC Website)

Delhi Mumbai Industrial Corridor (DMIC) is conceived to be developed as a Model Industrial Corridor of international standards with emphasis on expanding the manufacturing and services base and develop DMIC as the 'Global Manufacturing and Trading Hub'. It is envisaged that most of the projects in DMIC region would be implemented through Public Private Partnership. Special Purpose Companies would be established for project implementation, operation, maintenance and management of such facilities.

A band of 150 km to 200km has been chosen on both the sides of the Freight corridor to be developed as the Delhi-Mumbai Industrial Corridor. Accordingly, the project influence region of DMIC includes parts of Uttar Pradesh, Haryana, Rajasthan, Gujarat, Maharashtra and Madhya Pradesh. In addition to the influence region, DMIC would also include development of requisite feeder rail/road connectivity to hinterland/markets and select ports along western coast

The sectoral objectives for Delhi-Mumbai Industrial Corridor (DMIC) envisage provision of quality industrial investments and world class infrastructure facilities which, inter alia, includes

- Industrial Infrastructure:
  - Up gradation of existing industrial clusters/industrial estates with requisite facilities
  - Developing new industrial clusters or townships and export oriented manufacturing zones
  - Development of 'Skill Development Centers (or) Knowledge Hubs' consisting of schools, colleges, vocational institutes, engineering/ technical institutes, agricultural colleges with state-of-the-art research and development facilities with integrated residential, health/recreational facilities
  - Developing agro-processing hubs with cold storage, packaging and distribution and other allied infrastructure
  - Developing IT/ ITES Hubs/ other service oriented facilities
- Physical and Social Infrastructure:
  - Efficient logistics chain with multi-modal transshipment zones and logistic hubs
  - Provision of Feeder Road and Rail connectivity to ports, hinterlands and markets
  - Augmentation of existing port infrastructure and developing Greenfield ports
  - Up gradation/ Modernization of Airports
  - Captive Power Generation Plants with power transmission facilities
  - Ensuring effective environment protection mechanism for sustainable long term development

– Dovetailed residential, commercial, institutional, leisure/ recreational infrastructure to ensure attractive investment climate

② Implementation status of PPP Infrasturtucre in DMIC

High impact/ market driven nodes - Integrated Investment Regions (IRs) and Industrial Areas (IAs) have been identified within the corridor to provide transparent and investment friendly facility regimes. An Investment Region (IRs) would be a specifically delineated industrial region with a minimum area of over 200 square kilometers (20,000 hectares), while an Industrial Area (IAs) would be developed with a minimum area of over 100 square kilometers (10,000 hectares). 24 such nodes spanning across six states have been identified after wide consultations with the stakeholders i.e the State Governments and the concerned Central Ministries. The Project is proposed to be developed in two phases. Phase I of the project is planned to be completed by 2013. Phase II is planned to be completed by 2018. Nodes identified for each phase are given below:

Note: The projects would include both PPP and non PPP-projects.

Table 3-10 Snapshots of DMIC Phase 1

Investment Regions	Investment Areas
Dadri-Noida- Ghaziabad Region in Uttar Pradesh as General Manufacturing Investment Region;	Faridabad-Palwal Zone in Haryana as Engineering & Manufacturing Industrial Area;
Manesar-Bawal Region in Haryana as Auto Component/ Automobile Investment Region	Jaipur-Dausa Zone in Rajasthan as Marble/Leather/Textile Industrial Area; (Subsequently, Government of Rajasthan requested to replace this IA with Kishangarh, Ajmer)
Kushkhera-Bhiwadi-Neemrana Region in Rajasthan as General Manufacturing/ Automobile/ Auto Component Investment Region	Vadodara-Ankleshwar Zone in Gujarat as General Manufacturing Industrial Area;
Bharuch-Dahej Region in Gujarat as Petroleum, Chemical and Petro-Chemical Investment Region (PCPIR) (Subsequently, on Gujarat Government's request this Region is replaced with Ahmedabad-Dholera Investment Region, subject to the approval of Apex Monitoring Authority)	Meerut-Muzaffarnagar Zone in Uttar Pradesh as Engineering & Manufacturing Industrial Area;
Igatpuri-Nashik-Sinnar Region in Maharashtra as General Manufacturing Investment Region	Industrial Area with Greenfield Port at Dighi in Maharashtra;
Pitampura-Dhar-Mhow in Madhya Pradesh as General Manufacturing Investment Region	Nimach-Nayagaon in Madhya Pradesh as Engineering and Agro-Processing Industrial Area.

(Source: DMICDC Website)

Table 3-11 Snapshots of DMIC Phase 1

Investment Regions	Investment Areas
Kundli – Sonepat Investment Region	Rewari-Hissar Industrial Area
Ajmer-Kishangarh Investment Region	Rajsamand-Bhilwara Industrial Area
Bharuch-Dahej Investment Region	Pali-Marwar Industrial Area
Dhule-Nardhana Investment Region	Surat-Navsari Industrial Area
Ratlam-Nagda Investment Region	Valsad-Umbergaon Industrial Area
	Pune-Khed Industrial Area
	Shajhapur-Dewas Industrial Area

(Source : DMICDC Wesite)

– Current Status of DMIC projects

1. MoUs signed with all the DMIC States
2. Early Bird Projects identified and are given below

Table 3-12 The List of Early Bird Projects in DMIC project

State	Investment Region	Early Bird Projects
Haryana	Manesar-Bawal	Multi Modal Logistic hub Near Manesar ,Exhibition cum convention center .
Uttar Pradesh	Dadri-Noida-Ghaziabad	Development of Greater Noida (Boraki) Railway Station as a passenger and commercial cargo hub ,Development of Integrated Multi–modal Logistic Hub at Greater Noida near Dadri ,Development of International Airport near Greater Noida ,Development of Power Project at Greater Noida
Rajasthan	Khushkhera-Bhiwadi-Neemrana	Development of Aerotropolis in Rajasthan, Road link connecting Bhiwadi and Neemrana ,Development of Knowledge City.
Madhya Pradesh	Pithampur-Dhar-Mhow	Economic Corridor from Pithampur to Indore Airport, Integrated Multimodal Logistics Hub near Maksi , Improvement of Water Supply System & Wastewater Management for Pithampur Industrial Area ,Knowledge City in Ujjain ,IMLH in Pithampur Industrial Area, Integrated Multi-modal Logistic Hub in Pithampur Industrial Area
Gujarat	Ahmedabad-Dholera	Mega Industrial Park at Dholera SIR ,Greenfield international aviation hub near Ahmedabad ,Six laning of Ahmedabad-Vataman-Pipli-Bhavnagar road link with specific economic activities (207 km) ,Regional MRTS link between Gandhinagar - Ahmadabad & Ahmadabad-Dholera

State	Investment Region	Early Bird Projects
Maharashtra	Igatpuri-Nashik-Sinnar	Connectivity of Alewadi Port by Rail to Dedicated Freight Corridor and to Alewadi Port By 4 lane road to Mumbai-Ahmadabad Highway and to Mumbai Nasik Highway ,4 Lane road connectivity from Shirdi to Igatpuri via Sinnar ,Rail Connectivity of Revas Port and Dighi Port to Konkan Railway and 4 lane road connectivity of these ports to nearest National Highways ,Trans Harbour Road-Railway Link Project ,Inland Container Depot at Talegaon (Pune) ,Connectivity by 4 lane Road and Rail of Nevali Growth center (Thane) to DFC ,Rail Connectivity of Mumbai Port Trust to Dedicated Freight Corridor

(Source: DMICDC Website)

- Delineation Manesar Bawal IR:

  - Rewari has emerged as the suitable candidate district for MBIR
  - Area surrounding Jatusana and Kanina blocks have been identified for the Greenfield township with a projected population of about 4 million
  - Subsequently, it was decided that the proposed township be a brownfield township taking into account thealready approved master plans of Rewari, Bawal and Dharuhera
  - The consultants identified n area of interest of about 1725 sqkm based on the identified parameteters and came out with 2 options- Option 1 covered Rewari, Bawal and Khol blocks and Option 2 also included Pataudi block. Finally Option 2 was recommended for MBIR
  - The draft report on concept master plan for Phase-i OF Manesar Bawal IR has been approved by the government
  - Following projects have been finalized for pre feasibility studies:
    - Affordablelow cost housing
    - Education and health hub
    - Integrated multi modal transport hub at Punchgaon Cowk
  - The government has also requested DMICDC to include the following projects under DMIC initiatives:

- Gas based power plant
- Cargo airport
- Three expressways within Haryana sub region of DMIC

- The DMICDC has alos forwarded details of 52 sq. Km area for acquisition under Phase I of the MBIR.

- Exhibition cum Convention Centre (ECC) Project:

- The consultants undertook a study of about 8 sites for the propsed Exhibition cum Convention Centre and recommended the Panchgaon Chowk, Gurgaon site as the most appropriate site for the project. Subsiquently, they submitted a reporton the Market Assessment and Concept Plan for the ECC.
- The consultants have prepared the concept design and ownership modelling for the propsed ECC project and submitted a pre feasibility report for the same. The report has been approved in the meeting held on 20th October 2010.
- The consultants have submitted the pre feasibility report incorporating the inputs given by the State Government, which is under consideration of the Government for a final decision regarding the level of participation by the State in the project

- Integrated Multimodal Logistcs Hub:

- HSIIDC has signed a memorandum of understanding with M/S Dedicated Frieght Corridor Corporation of India Limited (DFCCIL) for setting up an integrated Multimodal Logistics Hub (IMLH)
- A location selection study (LSS) was carried out jointly by HSIIDC and DFCCIL for identifying a location for IMLH. Based on the LSS, the site falling in village Ludhana, Pithanwas, Garhi and Bolni upto Rajasthan border along with Rewari to Kot Quasim road was shortlisted for the project.
- The State government was accorded its approval to the location and the same has been conveyed to DFCCIL as well as the consultants.
- The consultants have submitted a pre feasibility and concept plan for integrated Multimodal logistics hub project. Few issues under the report, which need to be discussed includes shifting of HT Lines, drain and state highway passing through the project area.

- Another issue regarding extension of flyover on NH-8 at the Garhi Bolni Cowk has also been taken up with NHAI
- Approval of DFCCIL and the institutional framework for the project has been sought

- Mass Rapid Transit System between Gurgaon Manesar Bawal (MRTS):

- Three alternate alignments prepared for the route from Hero Honda Chowk to Bawal after detailed fiels reconnaissance, social and environment surveys etc
- As per preliminary assessment, the entire route for MRTS would be a combination of metro rail, LRTS, shuttle or sub urban rail etc and the same would depend on the final outcome of the traffic projections study of the MBIR, which is likely to be completed soon
- Based on the discussion between Haryana Government and DMIC consultants, alignment has been worked out, which has also been approved by the committee in the meeting on 20th October 2010. It was also advised that the alignments of the MRTS and RRTS be worked out in consultation with the various stakeholders and taking into account other such projects.
- Few decisions were taken during the meeting
    - A metro line (DMRC type) along the alignment for the Northern and Southern Peripheral Roads of Gurgaon Manesar Urban Complex
    - The metro rail currently planned till Rajeev Cowk, Gurgaon TO BE EXTENDED TILL Punchgaon Chowk
    - A sub urban rail system from Pachgaon Chowk to Bawal as proposed by the DMIC (MBIR) consultant

- Eco City Project:

HSIIDC had signed an MoU with a consortium of Japanese Companies (Toshiba-Tokyo-Gas-NEC) for developing an Eco-city project in Haryana. After an initial study, the consortium has identified IMT Manesar as the site for a pilot initiative for the Eco city project. The consortium has held meetings with the concerned departments of power, irrigation, industries, environment/pollution control board & HSIIDC and has submitted a report on the pilot project in April 2011, which is being examined.

3. All the Master Planning Consultants appointed
4. Loan documents in respect of JBIC loan for DMIC project signed on 28th December 2009 between IIFCL and JBIC with sovereign guarantee from Government of India (Ministry of Finance).
5. Eco-Cities in DMIC Region - On 28th December 2009, DMICDC has signed an MoU with JETRO/JBIC/NEDO/NEXI on "Development of Smart Communities and Eco-friendly Townships". Four pilot projects in three DMIC states of Gujarat, Haryana and Maharashtra finalized. Japanese consultants for each of the above states appointed by METI. Tripartite MoUs have been signed between DMICDC, state governments and Japanese consortia on 30.4.2010. Basic interaction and data gathering exercise by the Japanese consortia is completed at all the four sites. The status update for four identified Smart Community areas is mentioned below:
   - a) Toshiba Consortium, responsible for Manesar & Bawal Eco City project has completed their site visits and are in discussion with various stakeholders for preparing the draft feasibility report
   - b) Mitsubishi Consortium had submitted the pre feasibility repot for Changodar and Sanand before DMICDC
   - c) JGC Consortium, working on the Shendra Smart Community project had submitted the prefeasibility report
   - d) Hyflux Ltd., member of Hitachi consortium responsible for Dahej Eco city have submitted the Pre Feasibility report and is under discussion with various stakeholders
   - e) IL&FS IDC, the Indian side consultant for Smart Community Project, has submitted the Base Line Condition Report for Dahej, Changodar and Shendra Eco City Projects to DMICDC. The inception report for Manesar has also been submitted.

6. Early Bird projects identified in different states are under different stages of project development. The various stages of project implementation process for DMIC are:-
   - a. Preparation of Perspective Plan for overall DMIC Region
   - b. Preparation of Concept Plan for Investment Regions/ Industrial Areas
   - c. Preparation of Development Plan for Investment Regions/ Industrial Areas
   - d. Site and demand assessment
   - e. Pre feasibility/ Feasibility reports/ Project report/ Master plans
   - f. Detailed Project Report (DPRs) for the Power Projects

- g. Tying up land and necessary approvals in consultation with the State/Central Governments/Authorities including Environment Impact Assessment
- h. Project structuring
- i. Bidding them out on PPP and Turnkey modes for implementation

7. A fund is being proposed which will receive financing from GOI and other foreign borrowers or funding from donor agencies for implementing projects. It is under discussion with the government authorities and not yet approved

A detailed report on the DMICDC project implementation report is available on the website http://www.dmicdc.com/dmu_report.pdf

(2) Legislative/ Policy/ Institutional framework for PPP Infrastructure & Industrial Development

① Institutional framework

- Four Tier Systems for implementation of DMIC:

1. An Apex body, headed by the Finance Minister with concerned Central Ministers and Chief Ministers of respective DMIC States as Members for overall guidance, planning, and approvals. The functions of Apex body are :-
   - Project Approval – planning of the project, approval of its concept and various elements and inter-se prioritization of schemes;
   - Approval of the financing pattern – proportion of domestic and foreign capital, extent of public-private funding, Grants and Loans, approvals for viability funding arrangements;
   - Setting up of timelines for implementations and monitoring thereof.

2. A Corporate entity, Delhi Mumbai Industrial Corridor Development Corporation (DMICDC), specially envisaged to coordinate Project Development, Finance and Implementation, headed by a full time CMD and having representation from the central government, state governments and FIs has been set-up. Functions of DMICDC include
   - Detailed project preparation and obtaining various clearances for the components/sub-components;
   - Evolving financing patterns for different components including arranging finances, where required, on the basis of a sovereign guarantee;
   - Co-ordination with various Union Ministries and State Governments, Financial Institutions, and Infrastructure development agencies;

- Monitoring the implementation of various components & subcomponents and facilitating in their execution;
- Introducing 'state-of-the-art' implementation methodologies and know-how for quicker implementation of infrastructure projects;
- To undertake project development services for various central government projects and also help in assisting state governments (where desired);
- Secretariat of the DMIC Apex Authority.

3. A State-level Coordination Entity/ Nodal Agency responsible for coordination between the DMICDC and various state government entities and the project implementing agencies/ special purpose vehicles

Table 3-13 State Level Counterpart Authorities in DMIC projects

State	Agency
Rajasthan	Bureau of Investment Promotion
Haryana	Haryana State Industrial Infrastructure Development Corporation (HSIIDC)
Maharashtra	Maharashtra Industrial Development Corporation (MIDC)
Uttar Pradesh	1. Greater Noida Industrial Development Authority 2. Uttar Pradesh State Industrial Development Corporation Ltd.
Gujarat	Gujarat Industrial Development Board

(Source: prepared by Study Team)

The role of the state level coordination entity/ nodal agency is as follows:

- Facilitate all clearances required from the State Government
- Acquiring/ assisting in acquiring the land necessary for setting up of the infrastructure, processing and non-processing areas. The acquisition of land, if any, must be in accordance with law and must provide for rehabilitation as per the laid down norms. As far as possible, acquisition of agricultural land may be avoided.
- Ensuring the availability of world-class physical and social infrastructure, utilities and linkages under its jurisdiction within a stipulated time frame. It includes:
    - Power connectivity and availability of reliable and good quality power. The units may also seek open access as per the regulations of the State Electricity Regulatory Commission;
    - Provision of bulk requirements of water;
    - Road connectivity (State roads);

- Sewerage and effluent treatment linkages;
- Appropriate infrastructure to address the health, safety and environmental concerns.

- Arrange requisite funding for development of infrastructure, through budgetary resources, by availing existing schemes of Government of India as VGF and IIFCL etc or through loans from multilateral agencies.
- May notify additional package of incentives for attracting investors and successful development of Investment Regions/Industrial areas under the DMIC.

4. Project specific SPVs which would actually implement the projects: These SPVs can be owned by state governments. Some of these SPVs can also be formed by central/state governments and their agencies. The debt could be raised by DMICDC and passed on to SPV's.

Roles and Responsibilities of the Project Specific Special Purpose Vehicles will include design, finance, construct, operate, maintain and collect user charges/ toll, sharing revenue with the respective government agencies and transferring the project assets to the concerned agency at the end of concession period. Their functions are

- Implementation of specific components of the projects – easier to implement if each component is confined within a state boundary,
- Projects to be awarded to operators, preferably with all relevant clearances and awarded through a bidding process,
- Project operators to raise finances, implement and operate the project.

An illustrative chart showing the implementation structure and workflow is provided below

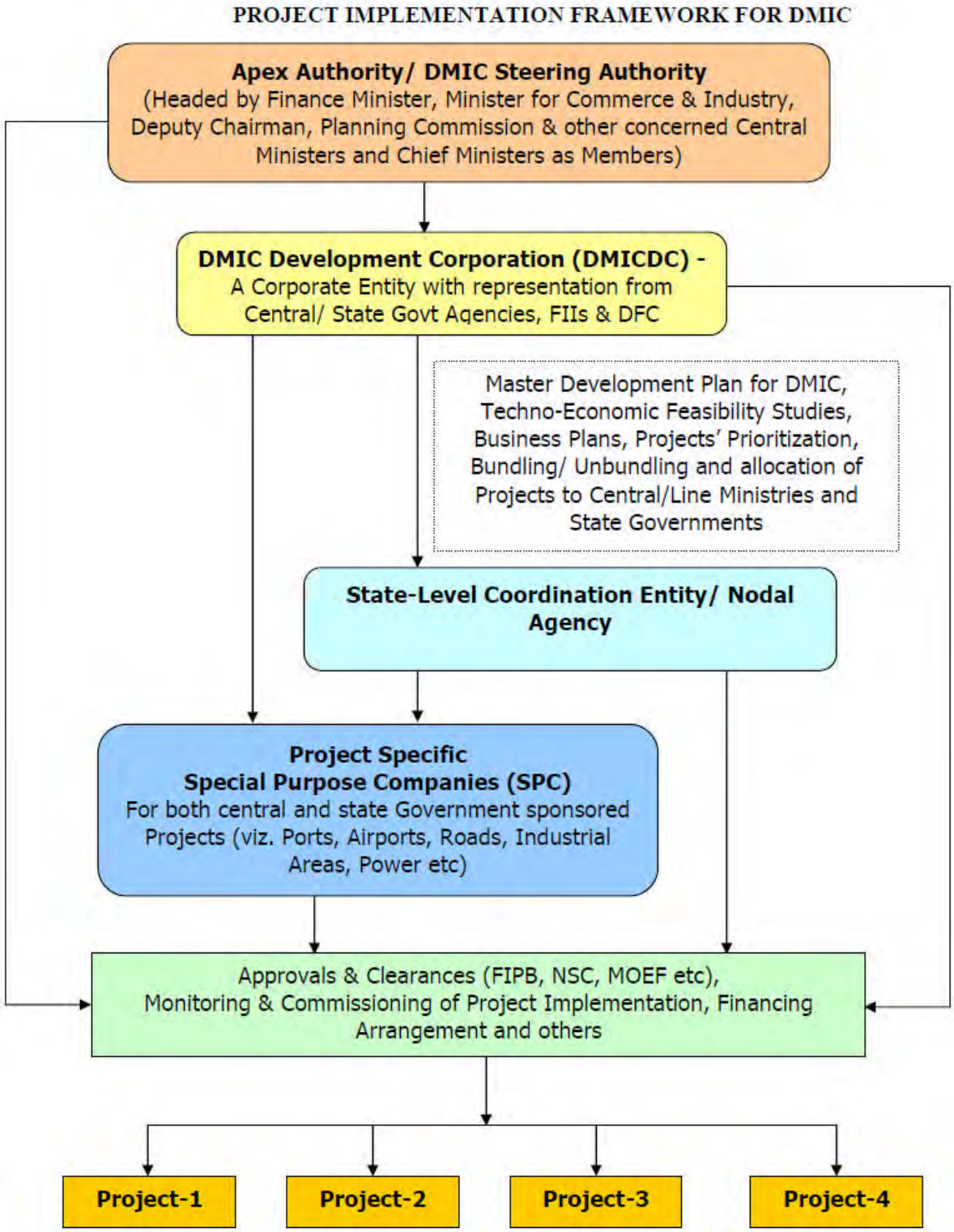

Figure 3-9 4th-tier institutional structure of DMIC project

(Source: DMICDC Website)

– DMICDC:

A Special Purpose Vehicle, Delhi Mumbai Industrial Corridor Development Corporation Limited (DMICDC), was incorporated on 7th January, 2008, as the Project Development Agency for DMIC. Government of India holds 49% equity and rest of the 51% share is held by financial institutions (Infrastructure Leasing & Financial Services Limited and Infrastructure Development Finance Company Limited). DMICDC undertakes project development services for investment regions / industrial areas/ economic regions/ industrial nodes and townships, for various central government agencies and also help in assisting state governments.

DMICDC acts as an intermediary for the purpose of development and establishment of infrastructure projects and facilities in along the corridor through developing and disseminating appropriate financial instruments, negotiating loans and advances of all nature, and formulating schemes for mobilization of resources and extension of credit for infrastructure. In addition, study, research and survey issues relating to financing infrastructure and to advise the central government, State Governments, Municipal authorities, other development authorities, companies, and project developers. DMICDC acts as a pass through entity for specific projects and raises various financing instruments such as 'Project Development Fund (PDF)' that could be used as a Revolving Fund and would specifically be used for undertaking project development activities on Public Private Partnership basis.

- Financial Structure:

  – 49 % equity contributed by GOI
  – 41 % equity contributed by IL&FS.
  – 10% by IDFC
  – 24% stake has been offered to each of the States.

(3) Supporting scheme of PPP Infrastructure by State Government / Authorities

① DMIC – PDF (DMIC Project Development Fund)

DMICDC has a Project Development Fund (PDF) referred to as 'DMIC - PDF'. An amount of Rs. 330 crore has been allocated for the PDF under the 11th Five Year Plan. The Japanese share in PDF amounting to US $ 75 Million is proposed to be secured as commercial loan from Japan Bank for International

Cooperation (JBIC), the international wing of Japan Finance Corporation handling commercial operations. The PDF would have two separate accounts, one PDF – Japanese Account and other PDF - Indian Account.

The PDF will initially finance the preparation of overall development (popularly known as Master Plans) and Feasibility Studies of identified projects therein which will be subsequently recovered by apportioning on to respective projects that would be developed by the private sector. Thus the PDF would be replenished for investment on developing other such projects.

Funds under both the Indian and Japanese Accounts of PDF, subjected to JETRO's recommendation of 'Japanese interest' for availing funds from Japanese Account, would be used for :

- Payment for the project preparatory/development expenses incurred up to the stage of selecting a successful developer for specific Greenfield and Brownfield industrial, physical and social infrastructure projects in the DMIC
- Payment to PMC and other external consultants
- In addition, the funds under PDF will cater to all expenses related to the setting up of the PDF, syndicating contributions to the PDF, as well as its operations, including but not limited to fees and expenses of custodians, paying agent, registrar, counsel and independent accountants, and any taxes, fees or other government charges levied against the Fund
- Funds under 'DMIC PDF – Japanese Account' shall only be used for payment towards project preparatory/development expenses, which is referred to in the first item above.

3.3 Current status of PPP Infrastructure in specific-sectors

3.3.1. Comparative status of Power sector with states

(1) Overview of PPP maturity and potential in specific states

The Overview of Power PPP maturity and potential in 5 target states is as follows.

Table 3-14 Overview of Power PPP maturity and potential in specific states

	Gujarat	Maharashtra	Karnataka	Tamil Nadu	Haryana
PPP Maturity					
Results of regional PPP Power projects					
Num. of executed projects[24]	• 4 projects	• 7 projects	• 0 projects	• 0 projects	• 0 projects
Frameworks for PPP Power projects:					
• Legislation setup					
• Policy setup	• Gujarat Power Policy • Gujarat Wind Power Policy • Gujarat Solar Power Policy		• Karnataka Renewable Energy Policy		• Haryana State Renewable Power Policy 2005
• Institutional setup		• Maharashtra Energy Development	• Karnataka Renewable Energy Development	• Tamil Nadu Energy Development	• Haryana Power Generation Corporation Limited, Haryana

[24] Projects before Bidding stage (until EOI stage)

	Gujarat	Maharashtra	Karnataka	Tamil Nadu	Haryana
		Agency (MEDA) • Maharashtra State Power Generation Co. Ltd. and Maharashtra State Electricity Transmission Co. Ltd, Maharashtra State Electricity Distribution Co. Ltd	Limited (KREDL) • Karnataka Power Transmission Corporation Limited (KPTCL)	Agency (TEDA) • Tamil Nadu Electricity Board, Tamil Nadu Generation and Distribution Corporation Ltd (TANGEDCO) and Tamil Nadu Transmission Corporation Ltd (TANTRANSCO)	Vidyut Prasaran Nigam Limited Uttar Haryana Bijli Vitran Nigam Ltd. and Dakshin Haryana Bijli Vitran Nigam Ltd. • Haryana Renewable Energy Development Agency (HAREDA)
PPP Potential					
Upcoming potential of PPP Power Projects					
Num. of upcoming projects	• 12projects	• 1 projects	• 6projects	• 1 projects	• 1 projects

(Source: prepared by Study Team referring pppinindia.com and states websites)

(2) Comprative status of Legislative/ Policy/ Institutional framework for PPP projects

① Policy framework

– Gujarat Power Policy

The objectives of the power policy of the State include to plan and build up adequate capacities in generation, transmission and distribution of Power through efficient and cost effective means, to rationalize the tariff structure to ensure reasonable rate of return to Power utilities and generate surplus needed for future investment, to improve delivery of services and achieve cost effectiveness through technical, managerial and administrative restructuring of the utilities etc. This policy has enabled private sector participation in the Power sector in the state.

– Gujarat Wind Power Policy

The new wind power policy was formed in 2007 in order to accelerate investment in the renewable energy sector. The policy will remain operational till 2012 and aid the government in the development of renewable energy sector given the dwindling resources of fossil fuels, increased threat of global warming and the concern on environmental protection. The policy will benefit wind energy generators by way of exemption from electricity duty and demand cut and a proper regulatory framework.

– Gujarat Solar Power Policy

The solar power policy, operative for the period from 2009 to 2014 is aimed at promoting generation of clean power by putting in place an appropriate investment climate that could leverage the Clean Development mechanism (CDM). The various areas addressed by the policy include productive use of wastelands, employment & skill generation, promotion of R&D, promotion of local manufacturing facilities and creation of environmental consciousness among citizens.

– Karnataka Renewable Energy Policy

GoK has put in place a Renewable Energy Policy with the following objectives:

- Development, propagation and promotion of renewable energy sources and technologies
- Development of eco-friendly projects and harnessing of natural resources to avail green power
- Acceleration of identification, development and implementation of new renewable energy projects

- Encourage the industries, in addition to sugar industry, with cogeneration potential to set up cogen plants expeditiously
- Provision of "single window" service for technical consultation, sources of finance and project clearance
- Decentralized and micro level power generation through renewable energy sources to provide energy supply to agriculture, industry, commercial and household sector
- Creation of suitable environment for private sector participation in renewable energy power generation
- R&D, publicity and popularization of renewable energy
- To establish linkages with national and international institutions for active collaboration in development, demonstration and commercialization of new and emerging renewable energy technologies
- To Take concrete steps for energy conservation and energy efficiency and Clean Development Mechanism (CDM)

- Haryana State Renewable Power Policy 2005[25]

The Department of Renewable Energy is responsible for formulating policies and programmes necessary for popularizing the applications of various non -conventional and renewable sources of energy in the State. Department had Notified its Policy for promoting generation of electricity through Renewable Energy Sources in November 2005.

The Policy aims to create conditions conducive for the involvement of private sector on public-private sector participation in Renewable Energy Sources based Power Projects in the State. It aims to achieve minimum of 500 MW of power through Renewable Energy by 2012. Salient features of Renewable Energy Policy are-

- Industry status in terms of New Industrial Policy-2005
- Electricity duty exempted.
- Wheeling & Banking facility
- No royalty on water used for power generation
- No conversion charges, External Development Charges, Infrastructure Development Charges & Scrutiny Fee for setting up of Renewable Energy Projects in Agriculture zone.
- PPA for 20 years or more depending upon the plants life.
- Local area development tax exempted.

[25] Source http://www.hareda.gov.in/?model=pages&nid=90

– Tariff to be decided by HERC

② Institutional framework

– Maharashtra Energy Development Agency (MEDA)

MEDA was set up in 1985 with an objective to undertake development of renewable energy and facilitate energy conservation in the State of Maharashtra, as a state nodal agency under the umbrella of the MNRE. Apex controlling body of MEDA is the governing body with the Minister of Non Conventional Energy, Maharashtra state, as Chairman.

– Maharashtra State Power Generation Co. Ltd. and Maharashtra State Electricity Transmission Co. Ltd, Maharashtra State Electricity Distribution Co. Ltd

Erstwhile Maharashtra State Electricity Board was looking after Generation, Transmission & Distribution of Electricity in the State of Maharashtra barring Mumbai. But with enactment of Electricity Act 2003, MSEB was unbundled in to 3 Companies viz. Maharashtra State Electricity Distribution Co. Ltd., Maharashtra State Power Generation Co. Ltd. and Maharashtra State Electricity Transmission Co. Ltd. on 6 th June 2005.

- Objectives:

  – Promote, develop and implement non-conventional, renewable and alternate energy devices and technologies
  – Take concrete steps for conventional energy conservation measures in industries, commercial establishments and domestic sectors
  – Assist the Government of India and Government of Maharashtra in renewable energy programme implementation
  – Evolve suitable alternatives to meet the burgeoning energy demand
  – Install demonstration power projects with own investment to in still confidence in new entrants and private investors
  – Pursue power projects based on renewable energy with large-scale private investments in commercially viable projects by creating suitable policy environment
  – Information dissemination and public awareness through training programmes, publications, exhibitions, seminars and conferences
  – Support large-scale distribution and marketing of stand-alone renewable energy devices by participating in field viability and commercialization exercises through innovative financing mechanism and creating investment opportunities

– Karnataka Renewable Energy Development Limited (KREDL)

KREDL was established in 1996 for the promotion of non-conventional energy sources in Karnataka. It focuses on promoting projects for harnessing energy from wind, small-hydro, biomass, solar energy and energy recovery from wastes through private investment. The company advises the Government of Karnataka on policies to be adopted for ensuring a systematic and balanced growth of projects for harnessing renewable energy sources

– Karnataka Power Transmission Corporation Limited (KPTCL)

Karnataka Power Transmission Corporation Limited (KPTCL) was set up in 1999 by carving out the Transmission and Distribution functions of the erstwhile Karnataka Electricity Board. KPTCL is headed by a Chairman and Managing Director at the Corporate office. The Board of KPTCL consists of a maximum of twelve directors. Karnataka Power Transmission Corporation Limited is mainly vested with the functions of Transmission and Distribution of power in the entire state. It operates under a license issued by Karnataka Electricity Regulatory Commission. KPTCL purchases power from Karnataka Power Corporation Limited, which generates and operates major power generating projects in the state consisting of hydel, thermal and other sources. KPTCL purchases power from KPC at the rate fixed by the State Govt. from time to time. KPTCL also purchases power from Central Government owned generating stations like National Thermal Power Corporation, Neyvelli Lignite Corporation and the Atomic Power Stations at Kalpakkam and Kaiga. The approximate share of power from these generating stations is around 16%.

– Tamil Nadu Energy Development Agency (TEDA)

Tamil Nadu Energy Development Agency (TEDA) is a nodal agency of the Ministry of New and Renewable Energy (MNRE), Government of India for the promotion of renewable energy schemes in the state. It has been registered as a society under the Societies Registration Act and is functioning since 1985. It is under the administrative control of energy department and has following specific objectives:-

- To promote the use of new and renewable sources of energy and to implement projects therefore.
- To promote energy conservation activities.
- To encourage research and development on renewable sources of energy

Promotional activities undertaken by TEDA

- Facilitates wind power development by undertaking wind resource assessment, setting up demonstration wind farms, offering financial incentives, etc.
- Encourages investment through attractive power purchase policies such as wheeling and banking facilities at concessional rate for captive use, reasonable tariff for power sold to TNEB.
- Organises awareness programmes on the use of renewable energy and energy conservation and efficiency for different sections of the public.
- Promoted cogeneration in sugar mills for the first time in India in 1992 through pilot projects in cooperative sugar mills which later on attracted huge investments for sugar mills in private sector.
- Carried out taluk/district level biomass assessment studies and encouraged private investment in biomass power projects.
- Encouraged decentralised power generation for rural applications through solar lighting, solar water/ air heating , solar/ wind mill water pumping, biomass gasifiers, biogas plants, etc.
- Enabled implementation of energy recovery from agro, industrial and municipal solid waste.
- Taken up implementation of electrification of unelectrified habitations using solar lighting and other renewable energy sources.
- Facilitating setting up of grid interactive solar power plants

- Tamil Nadu Electricity Board, Tamil Nadu Generation and Distribution Corporation Ltd (TANGEDCO) and Tamil Nadu Transmission Corporation Ltd (TANTRANSCO)

Tamil Nadu Electricity Board (TNEB) has been reorganised in 2009 by the establishment of a holding company, by the name TNEB Ltd and two subsidiary companies, namely Tamil Nadu Transmission Corporation Ltd (TANTRANSCO) - to primarily engage in the business of transmission of electricity and be vested with the transmission assets, interest in property, rights and liabilities of the Tamil Nadu Electricity Board and Tamil Nadu Generation and Distribution Corporation Ltd (TANGEDCO) as fully owned subsidiaries.

- Haryana Power Generation Corporation Limited, Haryana Vidyut Prasaran Nigam Limited Uttar Haryana Bijli Vitran Nigam Ltd. and Dakshin Haryana Bijli Vitran Nigam Ltd.

In August 1998, GoH unbundled Haryana State Electricity Board (HSEB) in two independent companies viz. Haryana Power Generation Corporation

Limited (HPGCL) to undertake generation of electricity and Haryana Vidyut Prasaran Nigam Limited (HVPNL) to undertake transmission, distribution and retail supply of electricity in the state of Haryana.

Subsequently in July 1999, two distribution companies viz. Uttar Haryana Bijli Vitran Nigam Ltd. (UHBVNL) and Dakshin Haryana Bijli Vitran Nigam Ltd. (DHBVNL) were separated from HVPNL to exclusively undertake the functions of distribution and retail supply of electricity in their respective geographic areas. Since then, UHBVNL and DHBVNL have been functioning as independent distribution companies. In effect, HERC granted license to HVPNL for conducting transmission and trading businesses whereas each of UHBVNL and DHBVNL were granted licence for distribution and retail supply of electricity.

Until June 2005, HVPNL was designated as "Single Buyer" (apart from being a "Transmission Licensee"). It was undertaking activities of bulk power procurement from various sources (including HPGCL, Inter State Generating Stations, Joint Sector Generating Stations, Captive Power Plants, Independent Power Producers, short-term trades, UI trades etc.) and bulk power sale to two distribution companies in Haryana (viz. UHBVNL and DHBVNL).

Owing to the high cost of power purchase in Haryana, the Discoms proposed, to the Government, for the shifting of the power procurement under their aegis for better management of unscheduled interchange (UI) in the current regime of availability-based tariff (ABT) and for reducing dependence on short term power procurement which comes at a relatively higher rate. The same was approved by the Government and hence the Haryana Power Procurement Cell (HPPC) was created, in April 2008, with the joint ownership of both the Discoms.

- Haryana Renewable Energy Development Agency (HAREDA)

The Department of Renewable Energy, Haryana was created in March, 1995 . Mandate of the Department was

- Promotion & implementtion of renewable energy programme / schemes
- Promotion of generation of power from renewable energy
- Energy conservation including implementation of ECA-2001
- Demand side management

HAREDA was created in May, 1997 to assist the Department in implementation of its programmes. HAREDA is the State Nodal Agency for co-ordinating all activities relating to renewable energy development including generation of power using non-conventional energy sources. HAREDA is

responsible for laying down the procedure for inviting the proposals from Independent Power Producers (IPPs), DPR preparation, evaluation of project proposals, project approvals and project progress monitoring etc. It functions as a single window clearing Agency for all Renewable Energy Power Projects for facilitating necessary clearances and approvals on behalf of the Govt. of Haryana

3.3.2. Comparative status of Water sector with states

(1) Overview of PPP maturity and potential in specific states

The Overview of Water PPP maturity and potential in 5 target states is as follows.

Table 3-15 Overview of Water PPP maturity and potential in specific states

	Gujarat	Maharashtra[26]	Karnataka	Tamil Nadu	Haryana
PPP Maturity					
Results of regional PPP Water projects					
Num. of executed projects[27]	• 0project	• 1project	• 2project	• 5 projects	• 0project
Frameworks for PPP Power projects:					
• Legislation setup					
• Policy setup	• Industrial water policy on the anvil				
• Institutional setup	• GWSSB	• WSSD • UDD • DMA • MWRRA • MJP	• KUWSDB • BWSSB	• MAWS • TWAD • CMWSSB • TNWIC	• SSB • NCRPB • PHED • HUDA • HSIIDC • （ ULB's）
PPP Potential					
Upcoming potential of PPP Water Projects					
Num. of upcoming projects	• 4projects	• 7projects	• 0 projects	• 2 projects	• 0project

(Source: prepared by Study Team referring pppinindia.com and states websites)

[26] Most of Water and Sanitation PPP projects are categorized as "ULB-Infrastructure" in the database of pppinindia.com.
[27] Projects before Bidding stage (until EOI stage)

(2) Comprative status of Legislative/ Policy/ Institutional framework for PPP projects

① Policy framework

– (Haryana) Existing Policy Framework:

The state does not have one comprehensive document on water or sanitation policy. In the absence of any specific legislation related to water sector in Haryana, the inputs of the National Water Policy formulated by Central Government become relevant as the main framework for state level policy. However, various policy directives that are passed from time to time are recorded as a part of Government Orders. There is no citizen charter that lays down the commitment on various service parameters for the sector. Actual service parameters are not declared formally. No institution is clearly responsible for setting service standards for water supply and sanitation. Technical standards defined by the central government are generally followed by the state. For asset creation, the state does not have any policy to decide the future WSS infrastructure requirements in the urban areas.

– (Haryana) Existing Regulatory Framework:

The municipalities and the municipal councils are governed by the Haryana Municipal Act, 1973. Municipal Corporation in Haryana is governed by Haryana Municipal Corporation Act, 1994.

A number of institutions are involved in regulation of the sector in Haryana:

- Economic regulation – Regulations related to tariff and asset creation are generally passed on by the state government. Asset creation is regulated through SSB. However, there is no link between asset creation approvals and cost recovery through appropriate tariffs.
- Water quality regulations – Health Department[28] (HD) is responsible for regulations related to water quality.
- Environmental Regulations – State Pollution Control Department (SPCD) is responsible for regulations related to treatment and disposal of effluents (including sewerage treatment). Three acts come under the purview of State Pollution Control Department (SPCD) – Water Act (1974), Air Act (1981) and Environmental (Protection) Act (1986).

However, regulations by HD and SPCD are weak and PHED is responsible for

[28] Health Department, Haryana is responsible for providing high quality, affordable and accessible, preventive, curative, promotive and comprehensive health care services to the people of Haryana. Through various schemes like National Health Programme, Family Welfare Programme, National School Health Programme, ESI Scheme, and other State Schemes, Haryana Department provides health infrastructure and other facilities in the state.

ensuring that water quality is of acceptable quality and in compliance with environmental norms.

② Institutional framework

– Gujarat Water Supply & Sewerage Board (GWSSB)

- Key Objectives of the board include:

  – To Plan and implement the Drinking Water Supply and Sanitation policy
  – To Plan and implement Annual and Five Year Programmes
  – To co-ordinate and review all Water Supply and Sanitation programmes
  – To Co-ordinate the Water and Sanitation programmes with Govt. of India
  – To approach International Funding agencies for procurement of funds and implementing the bilateral projects to control the administration of the Board and review the status
  – To support Water Conservation and Harvesting Programmes
  – To formulate and recover the water charges
  – To decide and implement the Water Supply & Sanitation service standards
  – To operate and maintain the Water Supply & Sanitation service standards
  – To operate and maintain the Water Supply Schemes to develop human resources for the effective implementation of programmes.

– Water Institutions in Maharashtra

There are several institutions involved in various aspects of UWSS services in the urban areas in Maharashtra. However, ULBs have the primary responsibility for providing these services. Provision of UWSS services is one of the obligatory functions of each of 247 ULBs in the state. In the case of a few small ULBs (about 25 ULBs), a state level agency (MJP) provides the O&M services for water supply as historically MJP was involved in creation of assets in these towns and there is a lack of capacity at the ULB level for management of the system.

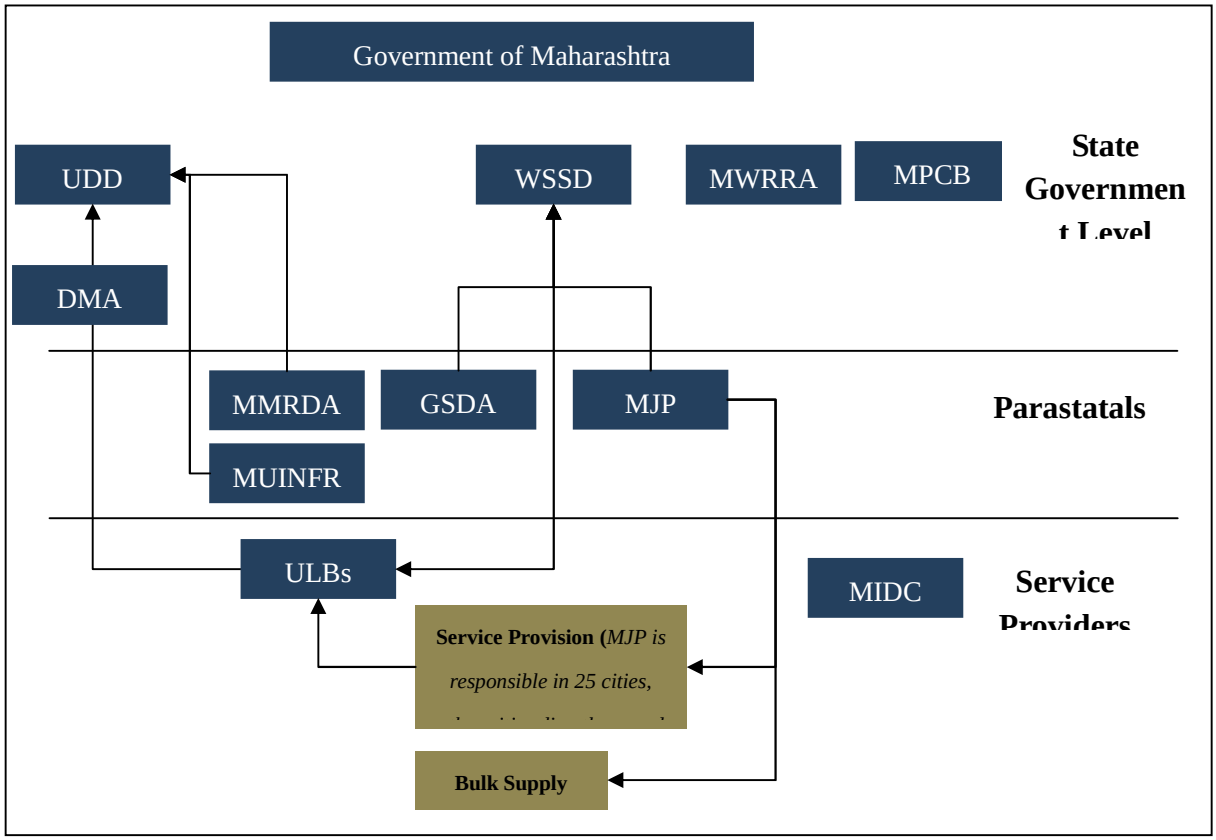

Figure 3-10 Existing Institutional Framework of UWSS sector in Maharashtra

Source: Government of Maharashtra

– Water Supply and Sanitation Department (WSSD)

At the state government level, water supply and sanitation department (WSSD) is the predominant agency that formulates policies for the development of WSS sector, allocates funds from the budget for the projects. It is also responsible for providing necessary technical approvals directly or through MJP. It is important to note that role of WSSD has evolved significantly from the past and will continue to undergo change in future due to the implementation of 74th Constitutional Amendment. WSSD will play a greater role as facilitator in development of the sector. It will have a primary focus on activities as policy framework, monitoring and capacity building.

– Maharashtra Urban Development Department (UDD)

UDD is responsible for administration and monitoring of all ULBs in Maharashtra. It is also responsible for channelizing funds for centrally sponsored schemes such as UIDSSMT and JNNURM. It also plays an important role in policy formulation in all aspects of urban governance and management. While Municipal Corporations report directly to UDD, Directorate of Municipal

Administration (DMA) is responsible for monitoring and supervision of ULBs other than Municipal Corporations.

– Maharashtra Directorate of Municipal Administration

DMA exercises control over all ULBs in the State except Municipal Corporations. DMA is also the state level nodal agency with respect to UIDSSMT projects. With respect to UWSS sector, DMA is responsible for the following activities:

- Inspect and supervise functioning of ULBs.
- Call for return and report from ULBs
- Seek sanction and approval from state government on matters relating to ULBs
- Enforce performance of duties on the ULBs.

– Maharashtra Water Resources Regulatory Authority

Maharashtra Water Resources Regulatory Authority (MWRRA) has been set up under the provisions of Maharashtra Water Resources Regulatory Authority Act, 2005. The MWRRA Act was enacted with the objective of establishing the Maharashtra Water Resources Regulatory Authority (MWRRA) for facilitating and ensuring the judicious, equitable and sustainable management, allocation, and utilization of water resources and fixing of rates for the use of water for agriculture, industrial, drinking and other purposes.

- Functions of MWRRA

  - To determine, regulate and enforce the distribution of entitlement for various category of use and the distribution of entitlement within each category of use
  - To establish water tariff system for various categories of water uses for stable & self sustainable management of service delivery
  - To support and aid the enhancement and preservation of water quality
  - To promote sound water conservation and management practices

– Maharashtra Jeevan Pradhikaran (MJP)

The Maharashtra Water Supply and Sewerage Board was constituted on the 1st January, 1997 under the Maharashtra Water Supply and Sewerage Board Act, 1976 for rapid development and proper regulation of Water Supply and Sewerage services in the State of Maharashtra. The name of the Board was changed as Maharashtra Jeevan Pradhikaran with effect from 10th march 1997.

The primary objective of the Pradhikaran is to promote potable Water Supply and satisfactory sanitation facilities to achieve and maintain clean environment. MJP's activities cover the following aspects:-

- Planning, investigation, designing, executive and maintaining Water Supply and Sewerage/Sullage Schemes
- Planning, Investigation, Designing, Execution of all the Municipal Water Supply and Sewerage Schemes
- Planning, Designing and Execution of Rural piped Water Supply Schemes sponsored by the Government of India and Government of Maharashtra costing more than Rs. 5.00 lac
- Execution of Water Supply and Sewerage Schemes on behalf of the Government of India for departments like Defence and State Government Departments
- Maintenance of Water Supply and Sewerage Schemes owned by the Pradhikaran
- Giving technical advice to Municipal Councils for works carried out by them.
- Procurement and servicing of L.I.C. and HUDCO loans for Urban Water Supply and Sewerage Schemes
- Low Cost Sanitation Schemes on behalf of State Government and Municipal Councils, Procurement and Servicing of Government Loans, Open Market Borrowing etc. for Urban Water Supply and Sewerage.

- Karnataka Urban Water Supply & Drainage Board (KUWSDB)

The board is an implementing body for Water Supply and Under Ground Drainage schemes in 213 Urban areas of the State except Bangalore city. The Board aims to provide adequate Water Supply from assured and safe sources of supply and proper sanitation to all the urban areas.

- Bangalore Water Supply & Sanitation Board (BWSSB)

BWSSB was set up in 1964 to carry out the following functions:

- Providing water supply and making arrangements for the sewerage and disposal of sewage in the existing and developing new regions of Bangalore Metropolitan Area
- Investigating adequacy of water supply for domestic purpose in Bangalore Metropolitan area
- Preparation and implementation of plans and schemes for supply of water for domestic purposes within the Bangalore Metropolitan area to the required standards

- Preparation and implementation of plans and schemes for proper sewerage and disposal of sewage of the Bangalore Metropolitan area
- Levy & collection of water charges

- Tamil Nadu, Department of Municipal Administration and Water Supply (MAWS)

The urban sector in Tamil Nadu comes under the oversight of the Department of Municipal Administration and Water Supply, Government of Tamil Nadu (MAWS). The department of Municipal Administration and Water Supply administers Urban Local Bodies and also implements development programs for the urban local bodies in the state. The department is also responsible for planning and implementing water supply and underground sewerage schemes in both rural and urban areas in the state

- Tamil Nadu Water and Drainage Board (TWAD)

TWAD is a statutory body formed by the government of Tamil Nadu, vested with the twin task of providing water supply and sewerage facilities to the entire state of Tamil Nadu except Chennai Metropolitan Area. TWAD came into existence on 14 th April,1971.

- Chennai Metropolitan Water Supply and Sewerage Board

The Board is responsible for planned development and appropriate regulation of water supply and sewerage services in the Chennai metropolitan area with particular reference to the protection of public health and for all matters connected therewith or incidental thereto. The Board was established under "The CMWSSB Act. 1978' and commenced functioning from 01.08.1978

- Tamil Nadu Water Investment Company (TNWIC)

TNWIC, promoted jointly by Infrastructure Leasing and Financial Services Limited (IL&FS) and Government of Tamil Nadu (GoTN), is a developer of water projects in India. Their services range from urban water and sewerage systems, desalination, industrial effluent management and recycling. They attempt to implement public private partnership / community participation models which promote sustainable development.

Key Projects:

- Tirupur Water Supply and Sewerage Project
- Tirupur Common Effluent Treatment Project
- Ambur Tannery Effluent Treatment Project
- Industrial Infrastructure Upgradation Scheme for Tirupur

– Sewage to Industrial Grade Water Project

– Water Institutions in Haryana

Government of Haryana along with the assistance of State Sanitary Board is responsible for policymaking and tariff setting for the WSS sector in Haryana. The responsibility for delivery of UWSS services in Haryana is with PHED. As far as regulation of the sector is concerned, there are a number of institutions involved in activities like tariff setting, asset creation, water quality monitoring, regulation of water resources in the state etc. There are no clear standards of service delivery followed by PHED. While there are several institutions such as the Health Department, State Pollution Control Board that are responsible for regulation of quality and environmental norms, in practice they unable to exercise effective control monitoring of service quality.

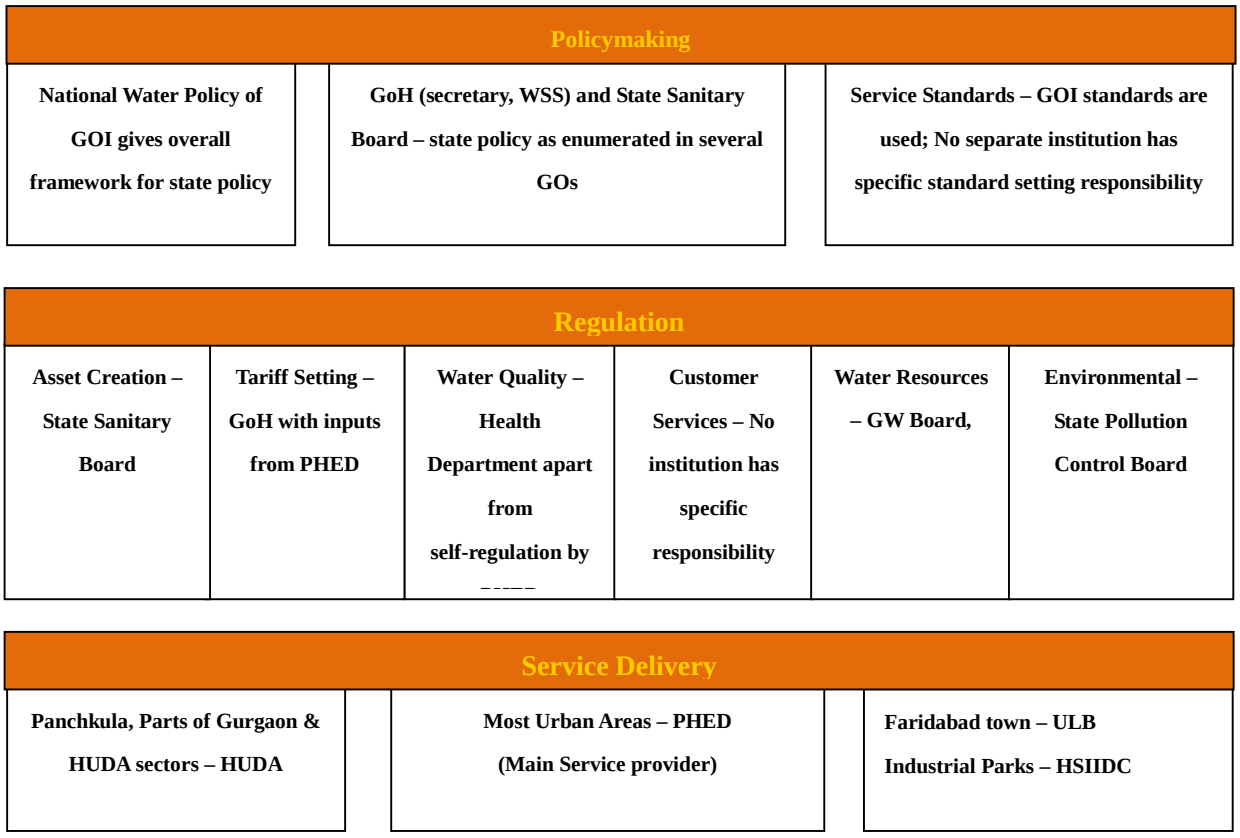

Figure 3-11 Institutional structure of Water and Sanitation Sector in Haryana

(Source: prepared by Study Team)

Details of roles and responsibilities of some institutions involved in UWSS sector in Haryana are given below:

- State Sanitary Board (SSB) – Although the policy-making role is entrusted with the State Government of Haryana, it promulgates policies through SSB. The SSB predominantly has a consultative and allocative role. It sanctions the allocation of funds depending upon the quantum of budgetary allocations for asset creation of the water supply and sanitation schemes in the State.
- National Capital Region Planning Board (NCRPB) – NCRPB is responsible for preparation of development plans for NCR regions. It is also responsible for coordinating and monitoring the implementation of such plans and for evolving policies for the control of land-uses and development of infrastructure in the NCR regions.
- Public Health Engineering Department (PHED) – PHED is a state level department in Haryana which is mainly responsible for asset creation, service provision for water and sewerage services, billing and collection. The main stated objective of the PHED is providing potable & drinking water supply in villages, potable & drinking water supply and sewerage facilities in towns, storm water disposal in towns, construction of sewage treatment plants & sanitary installations and amenities in government buildings. To achieve this objective, the department undertakes planning, execution, operation and maintenance of works related to water supply and sanitation in both rural and urban areas. PHED also provides inputs on technical and cost issues to the Secretary PHED relevant for policy decisions. Fund allocation for projects across the state is also done through PHED. PHED also serves as the nodal agency for disbursing Central government funds under various schemes.
- Haryana Urban Development Authority (HUDA) – HUDA is a parastatal agency that is mainly responsible for development of urban areas in a systematic and planned way. HUDA is responsible for provision of WSS services in Panchkula town and some parts of Gurgaon town. In Panchkula, HUDA maintains the water supply and sewerage system under the provisions of the HUDA Act.
- Haryana State Industrial Development Corporation (HSIDC) – HSIDC is the nodal agency to develop industrial and support infrastructure in the state. It was set up for promoting and accelerating the pace of industrialization. HSIDC is responsible for provision of WSS services in industrial areas developed by it. Majority of the industries in Haryana (more than 95%) are located within the HSIDC industrial areas/estates. In some cases, the sanitation services are provided jointly with HUDA.
- Urban Local Bodies (ULBs) – At present ULBs are divorced of any responsibility with respect to UWSS services. Until 1993, UWSS services

were provided by the ULBs but were transferred to PHED due to the lack of technical and financial capacity of ULBs. However, in case of Gurgaon and Faridabad, ULBs are responsible for provision of UWSS services. However, there are 9 Municipal Corporations in Haryana State namely Ambala, Faridabad, Gurgaon, Hisar, Karnal, Panipat, Rohtak, Panchkula, Yamuna Nagar.

3.3.3. Comparative status of Roads & Highways sector with states

(1) Overview of PPP maturity and potential in specific states

The Overview of Roads PPP maturity and potential in 5 target states is as follows.

Table 3-16 Overview of Roads PPP maturity and potential in specific states

	Gujarat	Maharashtra	Karnataka	Tamil Nadu	Haryana
PPP Maturity					
Results of regional PPP Roads projects					
Num. of executed projects[29]	• 24 projects	• 28project	• 1 project	• 2 projects	• 4projects
Frameworks for PPP Power projects:					
• Legislation setup			• Karnataka Highway Act, 1964		
• Policy setup	• Gujarat State Road Policy	• Policy on implementation of Road & Bridge Projects though private sector participation, 1996	• Karnataka Road Sector Policy, 2009	• (proposed) Draft Road Policy	•
• Institutional setup	• GSRDC	• MSRDC	• KRDCL • KSRTC	• TNRDC	• PWD • HSRDC
PPP Potential					
Upcoming potential of PPP Power Projects					
Num. of upcoming projects	• 15 projects	• 21projects	• 19 projects	• 1projects	• 2projects

(Source: prepared by Study Team referring pppinindia.com and states websites)

[29] Projects before Bidding stage (until EOI stage)

(2) Comprative status of Legislative/ Policy/ Institutional framework for PPP projects

① Policy framework

– Gujarat State Roads Policy

The objectives of the State Road Policy (1996) included providing an adequate and efficient Road system encompassing all transportation needs to ensure smooth and uninterrupted flow for intra and inter state goods and passenger traffic. The policy envisaged an enabling legislation to facilitate private sector participation in Road projects. The Gujarat Government subsequently amended the Bombay Motor Vehicles Act, 9 of 1994, to permit the levy of toll on either new construction or strengthening/improvements of Road and bridge projects. It also provided for the procedure for selection of the bidder, suggested incentives for the state government and outlined the role of the state government in the process.

② Institutional framework

– Gujarat State Road Development Corporation Limited (GSRDC)

GSRDC was formed as a wholly owned government undertaking in 1999 in order to implement the plans laid down in Gujarat Infrastructure Agenda – Vision 2010.

- Key Objectives of the corporation are:

  – To under the development of bridges and roads
  – To raise financial resources form banks, Institutions, mutual funds, individuals etc
  – To commercially develop & exploit land alongside the roads/bridges
  – Other objects-Draw up plans for the project, prepare feasibility studies, become a consultant or appoint a consultant for environmental studies etc

– Maharashtra State Road Development Corporation (MSRDC)

The road infrastructure in the State is managed by various local bodies including Public Works Department of the state, municipal corporation, Maharashtra State Road Development Corporation (MSRDC), Maharashtra Industrial Development Corporation (MIDC), Forest Department.

MSRDC was established in 1996 for the development of roads and allied infrastructure mainly through private participation. Most of the projects undertaken by MSRDC are on 'Build, Operate and Transfer basis . MSDRC mainly deals with road projects, flyover projects, toll collection rights etc. Since inception, MSRDC has completed 18 projects with estimated cost of Rs. 7,187

crore and actual expenditure incurred is Rs. 6,817 crore.MSRDC has executed several notable projects, including the prestigious Mumbai-Pune Expressway (MPE), flyover projects in Mumbai, rail-overbridges across the state etc. The key projects under various phases of implementation include Bandra-Worli Sea Link and Trans Harbour Link, among others.

- Karnataka Road Development Corporation Ltd. (KRDCL)

KRDCL was incorporated in 1999 as a wholly owned Government of Karnataka Company as per the provisions of the Company Act, 1956. KRDCL is a company under the Karnataka Public Works, Ports and Inland Water Transport Department. The Company was established to promote surface transport infrastructure to improve:

- Road network by taking up construction of roads,
- Construction of bridges,
- Maintenance of roads etc., and
- To take up road projects on Public Private Partnership (PPP) basis

Since inception, KRDCL has strived to improve the road network and to establish connectivity to all the nook and corner of the state. KRDCL has taken up the development of 10000 km of the core road network and 2866 kms of rural connectivity with private sector participation on DBOT basis

- Karnataka State Road Transport Corporation (KSRTC):

The Karnataka State Road Transport Corporation was established in 1961 under the provisions of Road Transport Corporation Act 1950 with the objective of providing adequate, efficient, economic and properly coordinated road transport services.

Key objectives of the organization:

- To define a vision of urban development in Karnataka
- To provide the framework and strategy for guiding the urban development of the state to realize the stated vision

- Tamil Nadu Road Development Company Limited (TNRDC)

TNRDC was set up in May 1998 as a 50:50 joint venture of Tamil Nadu Industrial Development Corporation (TIDCO), the investment arm of Government of Tamil Nadu (GoTN) and Infrastructure Leasing and Financial Services Ltd (IL&FS). In November 2009, Tidel Park Ltd (TIDEL) completely acquired the equity shares of TNRDC held by IL&FS thereby making it a JV of

TIDCO and TIDEL. TIDEL is the first largest IT facility in India promoted jointly by Tamil Nadu Industrial Development Corporation (TIDCO), Electronics Corporation of Tamil Nadu Limited (ELCOT), both fully owned organisations of Government of Tamil Nadu.

TNRDC was set up with the mandate of developing initiatives in the road sector by catalyzing private sector resources and investments under Public-Private Partnership (PPP) framework. TNRDC's activities range from project conceptualization to implementation, operation and maintenance. The core strength of TNRDC is in formulating appropriate implementation and financing strategies for infrastructure projects so that they are implemented in an efficient and time bound manner while adhering to estimated costs and quality specifications.

- State Public Works Department – Nodal Agency for State Highways

State Public Works Department (Building & Roads) is responsible for planning, approving, executing, regulating and monitoring of State Highways projects. National Highways of 1,346 km is under State PWD (B&R). National Highways falling in the state are being maintained by State PWD (B&R) with funds made available by Government of India. State PWD is the concessioning authority for state PPP projects. Most of the PPP projects have been awarded on BOT (Toll) basis.

- Haryana State Roads & Bridges Development Corporation (HSRDC)

Haryana State Roads & Bridges Development Corporation Ltd (HSRDC) is an SPV created by Haryana PWD Department. Registered Office of the Company is situated at Panchkula near Chandigarh. The main objectives of HSRDC are to develop, administer, manage, control, maintain highways, expressways, roads, bridges, sideways, bye-passes, tunnels, pavements, reclamation, improvements, road over bridges, road under bridges, underground roads.

3.3.4. Comparative status of Ports sector with states

(1) Overview of PPP maturity and potential in specific states

The Overview of Ports PPP maturity and potential in 5 target states is as follows.

Table 3-17 Overview of Ports PPP maturity and potential in specific states

	Gujarat	Maharashtra	Karnataka	Tamil Nadu	Haryana
PPP Maturity					
Results of regional PPP Power projects					
Num. of executed projects[30]	• 24projects	• 5projects	• 0projects	• 1projects	• 0projects
Frameworks for PPP Power projects:					
• Legislation setup			• Karnakata Ports (Leading&Shipping fees) Act 1961		
• Policy setup	• Port Policy, BOOT Policy	• Port Policy 2010	• Karnataka Port Policy 1997	• Minor Port Development Policy	•
• Institutional setup	• Gujarat Maritime Board	• JNPT, Maharashtra Maritime Board	• Department of Ports and Inland Water Transport	• Tamil Nadu Maritime Board	•
PPP Potential					
Upcoming potential of PPP Power Projects					
Num. of upcoming projects	• 18projects	• 1projects	• 4projects	• 0projects	• 0projects

(Source: prepared by Study Team referring pppinindia.com and states websites)

[30] Projects before Bidding stage (until EOI stage)

(2) Comprative status of Legislative/ Policy/ Institutional framework for PPP projects

① Policy framework

– Gujarat Ports Policy

This policy was introduced in 1995 and envisaged integrated Port development with private sector participation (consisting of creation of port facilities, industrialisation and development of infrastructure facilities like Roads and railways in the hinterland), synchronisation of small and large investors in the Port sector and creation of a market driven Port sector. This was followed by a BOOT Policy in 1997 which envisaged maximum operational flexibility with tariff freedom, maximum concession, lowest water front royalty (single levy of the state government), no business development restriction etc.

– Maharashtra Port policy 2010[31]

The Government of Maharashtra has encouraged development of port sector and adopted an investor-friendly Port Policy. The port policy has evolved over the years with considerable changes during 1996, 2000, 2002. The salient features of the port policy are:

- Development on Build, Own, Operate, Share and Transfer (BOOST) basis
- Concession period of 50 years
- Concessional Wharf age on cargo handling at port
- If available, Govt. land on lease at market valuation
- Equity participation in SPV by MMB up to 11%
- Whereas, road linkage to nearest State Highway are to be partly funded by the State, development of roads within port limits will be the responsibility of developer.
- Freedom given to developer to fix tariffs
- Government to appoint two Directors on SPV company formed for port development

– Tamil Nadu Minor Port Development Policy, 2007[32]

Tamil Nadu Maritime Board is fully aware of the importance of the industrialization for the economic development of the state. It encourages setting up of captive ports, jetties and moorings for the port based oil industries, thermal power projects and also multi user ports on "BOOT" basis. To provide for

[31] Source http://www.mahammb.com/images/pdf/Revised%20Port%20Policy%20GR_20%5B1%5D.08.2010.pdf
[32] Source http://www.tnmaritime.com/policy.php

the investment opportunities for the development of minor ports in Tamil Nadu, the government of Tamil Nadu has formulated and is implementing a Minor Port Development Policy since August 2007

The main highlights of the Port Policy:The aim of the Board is to promote cordial relationship between the ports and industries to ensure development of ports and industrial growth. It also aims to accelerate the pace of economic growth of the state by developing a number of captive ports through public private participation.

- Objectives

  - To facilitate establishment of port based thermal power plants by providing exclusive port facilities to import coal, Naphtha, oil and natural gas.
  - To provide port facilities to promote export oriented industries and port based industries along the coastal districts of Tamil Nadu.
  - To decongest highways and railways by providing facilities for coastal traffic along the east coast.
  - To promote tourism, cruises and coastal trade.
  - To provide facilities to encourage ship repairing and construction of floating crafts.

- Policy guidelines

Private Participation :With a view to create multi user facilitates capable of handling all types of cargo like bulk, break bulk, containers, liquid bulk, petroleum products, chemicals, the government of Tamil Nadu has decided to develop all the minor and intermediate ports in the state through public private participation.

Captive jetties: In order to satisfy the requirements of industries for allocation of sites for construction of captive jetties for port-based industries and create facilities, government of Tamil Nadu has decided to allow private initiative to construct jetties. Private companies making substantial investment in coastal areas requiring port based facilities will be allotted sites for construction of jetties both captive and commercial.

Approach: The private participation in construction / development of ports/ jetties is encouraged through a well set out transparent procedure and each proposal is considered on its own merits. The thrust of the policy is to encourage effective private participation and to that extent the approach in finalizing the

proposals is flexible on a case to case basis.

- Operational Strategy:

  – To maintain transparency and to invite competitive bids through global tenders.
  – To promote the project on the principle of Build, Own, Operate and Transfer (BOOT)
  – The period of BOOT will initially be for 30 years and may be extended up to 50 years.
  – Will recover a reasonable amount on the cargo handled.

② Institutional framework

– Gujarat Maritime Board (GMB) – Executing Agency for Ports

Gujarat Maritime Board was created in 1982 under the Gujarat Maritime Board Act, 1981, to manage, control and administer the minor ports of Gujarat.

- Objectives:

GMB presently manages the 41 minor ports of the State with a vision 'To enhance and harness ports and international trade as vehicles for economic development'.

  – To maximize coastal benefits and strategic advantages of Gujarat Ports
  – To capture maximum traffic at Gujarat Ports and enhance container traffic at GMB Ports
  – To further strengthen its role in liquid and bulk cargo
  – To develop Gujarat as a Shipbuilding/Repair Hub
  – To promote various other port led development as Ro-Ro Ferry Terminal services, Jetty Services, Marine Tourism, Logistic Parks
  – To provide services, property and infrastructure support that will promote private investment
  – To ensure and protect ecological balance and safeguard social and environmental issues
  – To bring innovation and implement latest technology at all ports
  – To ensure safety and security at all levels of operation

– Jawaharlal Nehru Port Trust Limited (JNPT, □Central)

Jawaharlal Nehru Port was commissioned in 1989 with a vision to provide integrated logistics services to the best interest of trade and customers. The port was created to augment the shipping capacity in Mumbai and provide an

alternative to merchants wanting to save octroi charges imposed by the Brihanmumbai Municipal Corporation. The port is run by the Jawaharlal Nehru Port Trust, an organization entrusted with the operations of the large shipping port in Navi Mumbai, India and controlled by the Central Government of India.

It is located at the eastern end of Mumbai in the Nhava Sheva area. Initially, only two terminals were constructed - the Bulk Terminal for handling of import of dry bulk cargo and the Container Terminal for import and export of containerized cargo. Over the past few years, port has diversified its activities for automobiles (export), liquid bulk, cement (coastal cargo) and few other commodities.

JNPT is the country's largest container port, with container traffic of over 4.1 million 20-foot-equivalent unit (TEUs) in 2009-2010. It also ranks among the top 30 container ports in the world. JNPT has a container terminal, which has been developed through private investment on a build-operate-transfer (BOT) basis

– Maharashtra Maritime Board

Maharashtra Maritime Board (MMB) came into existence in 1996 and Commissioner, Water Transport was re-designated as Chief Executive Officer, MMB.

- Functions of the Maharashtra Maritime Board are as follows:

  – Development of Minor Ports and Harbours for promoting cargo movement with a view to boost the economic activity along the coastline and state's hinterland
  – Enforcement of Maritime Rules & regulations for administration and conservancy of ports, for regulating traffic and tariff structure and licensing of crafts etc.
  – Development of Inland Water Transport for cargo as well as for passenger movement in the inland waterways within the state
  – To carry out Hydrographic Surveys and other allied investigations along the west coast of Maharashtra in the creeks as well as in the rivers of the Konkan region.
  – To carry out various functions assigned to it by the GOM from time to time.

The State Government has taken a policy decision to develop all 48 minor ports in the State with participation of private sector under control of Maharashtra Maritime Board. In the phase-I, it has been decided to develop seven minor ports viz. Dighi, Rewas-Aware, Jaigad, Vijaydurg, Redi, Anjanwel (Dabhol) and

Alewadi.

– Tamil Nadu Maritime Board

There are three (3) major ports viz., Ennore, Chennai and Thoothukudi and seventeen(17) minor ports within the 1076 km long coastline of Tamil Nadu. The major ports, set up under the Major Port Trust Act 1963, come under the control of government of India and the minor ports, declared under the Indian Ports Act 1908, come under the control of the state government. The Tamil Nadu Port Department, which was administering the minor ports in Tamil Nadu, was converted as Tamil Nadu Maritime Board under the Tamil Nadu Maritime Board Act, 1995) with effect from 18.03.1997.Major activities of Tamil Nadu Maritime Board are:-

- Management of minor ports
- Creation of minor ports through private participation
- Running maritime academy connected with ship to give employment opportunity to youth

Chapter 4 Bottlenecks of foreign direct investment for PPP Infrastructure in India

4.1 Overview of risks on foreign direct investment for PPP Infrastructure in India

The following section reviews major risks as bottlenecks for private sectors by comparing standard risk allocation defined in Standard Power Purchase Agreement (Standard PPA), Master Concession Agreement (MCA), Master Transmission Agreement / guidelines and issues revealed under actual implementation. The chapter reviews measures on the issues taken by Indian and foreign companies.

(1) Inflation Risk

In principle, regarding cost increases due to price fluctuations during the term of the project, adjustments are made by linking business income to price fluctuations. However, whether all income is linked to prices or not, and estimates[33] of the upper limit of indexation of user fee vary among the different sectors. Furthermore, as price indices have not been set precisely, it is possible that there will be deviation with the actual inflation.

Table 4-1 Principals for allocating and mitigating inflation risk by sectors

Sector	Standard Definition
Power (Generation)	• The capacity component of tariffs may feature separate non-escalable (fixed) and escalable (indexed) components. The indices to be adopted for escalation of the escalable component shall only be Wholesale Price Index (WPI) or Consumer Price Index (CPI) and the Base year shall be specified in the bid document. • Only if energy charges is quoted as escalable, the escalation rate is as notified by CERC. The energy charges payable during the operation of the contract shall be related on the base energy charges specified in the bid with suitable provision for escalation. However, the fuel escalation will be subject to any administered price mechanism of Government or independent regulatory price fixation in case of fuel produced within the country.

[33] The basic thinking regarding the setting of an upper limit for price fluctuation is based on two premises: (1) Price fluctuation should be in accordance with OPEX and (2) CAPEX/OPEX ratio for each sector should be virtually the same between each individual project. Accordingly, these upper limits (power transmission: 30%, roads and ports: 40%, underground rail: 60%) are deemed as virtually the same as the OPEX ratio for a standard project in each sector.

	– The escalation rate for fuel is notified by CERC every 6 months and irrespective of the actual pricing mechanism for the generator, the payment is made on prices quoted and escalation rate as notified by CERC
Power (Transmission)	• The bidder is free to quote annual transmission charges as escalable and non escalable, and the escalable charges is escalated based on index notified by CERC (not WPI). The MCA provides for indexation of the user fee to the extent of 30 per cent thereof linked to WPI.
Road and Port	• The MCA provides for indexation of the user fee to the extent of 40 per cent thereof linked to WPI[34].
Metro Rail	• The MCA provides for indexation of the user fee to the extent of 60 per cent thereof linked to WPI.
Water and Wastewater	CPI or WPI linked index is not common in most water supply concessions/management contracts in India. There would be a provision of revision of tariffs.

(Source: prepared by Study Team referring Standard PPA and MCAs)

① Responses from Indian/Foreign companies

It is expected that companiese accept inflation risks as a part of the project risks, since it is partly allocated to the tariff/payments.

(2) Foreign Exchange Risk

As a principle, most sectors provide no allocation / mitigation rules for foreign currency exchange risk between public and private relations. For power generation, it is assumed to be the risks borne by the private sector. It is defined that power purchase tariff is in Indian Rupee and if there is foreing exchange risks, they will be borne by the private sector. [35]

② Responses from Indian/Foreign companies

While exchange rate risk is to be borne by the private sector, there is a general consensus that in the mid to long term the rupee will appreciate in reflection of India's economic growth, India's domestic INR/USD swap market is functioning[36] steadily, and that there exist large local sponsors in India who

[34] It is noted that as the escalation in user fee is only linked to O&M expenditure. Typically the share of capex vs. opex tends to be 60:40 and since only opex needs to be inflation adjusted, only 40% of the tariff may have been linked to user tariffs

[35] Source: Guidelines for Determination of Tariff by Bidding Process for Procurement of Power by Distribution Licensees

[36] However, according to a comment from a particular Japanese financial institution, regarding acceptance of currency swaps,

consider important the difference in interest rates between rupee denominated loans and foreign currency demonimated loans, particularly USD denominated loans[37], by local banks in India[38], and therefore it seems foreign companies entering India believe they can mitigate the exchange rate risk by appropriate management.

There was also an opinion from a private sector operator that if they do not work on the presumption of short term recovery of funds, but rather if it was possible to reinvest the project income in India and make a mid to long term business commitment, the exchange rate risk itself would not necessarily be such a significant problem.

(3) Legal/Regulation/Permission Change Risk

In principle, all political risks are to be borne by the publid sector and losses of private sector to be compensated based on appropriate agreed plan. As per Model Concession Agreement, change in law means the occurrence of any of the following after the date of Bid: (a) the enactment of any new Indian Law; (b) the repeal, modification or re-enactment of any existing Indian Law; (c) the commencement of any Indian Law which has not entered into effect until date of Bid; (d) a change in the interpretation or application of any Indian Law by a judgement of a court of record which has become final, conclusive and binding, as compared to such interpretation or application by a court of record prior to the date of Bid; or (e) any change in the rates of any of the Taxes that have a direct effect on the Project.

However, these changes shall not include (i) any change in any withholding tax on income or dividends distributed to the shareholders of the Seller, or (ii) change in respect of UI Charges or frequency intervals by an Appropriate Commission or (iii) any change on account of regulatory measures by the Appropriate Commission including calculation of Availability.

In case of roads, MCA deals with changes in law. It provides as follows:-

– Change in law resulting in financial effect of amount exceeding/decreasing by an amount of INR 1 crore and 0.5% of the Realisable Fee, whichever is higher, provides for scope of amendment in the concession agreement so as to place the Concessionaire in the same financial position enjoyed by him before such change
– No claim in the event of recovery from users of any additional cost arising from such change in law

However, in the event that standards for changes to laws or approval arenot clear, or a

currently in India in effect only the Standard Chartered Bank is providing these.

[37] According to a foreign financial institution with a presence in India, interest rate on rupee denominated loans is about 12-13%, and around 7-8% on dollar denominated loans. As domestic demand for the dollar is high, there is a distortion in the INR/USD swap market, and if money borrowed in US dollars is put into INR, spread can be achieved on interest on loans in INR.

[38] Source: A comment from a particular international aid institution

business operator must explain the losses suffered due to law/approval change risk, or otherwise the financial effect of a law/approval change is below a certain level, in effect this is borne by the private sector operator, and over this level the risk will be borne by the project implementing institution subject to procedure and explanation given on the initiative of the private sector operator. From this it is apparent the law and approval change risk is influenced by the concession, agreement and other types of documentation as well as the depth of commitment of the project implementing institution, and the opinion was expressed that when there are problems with these, it is often the case that basically the burden is shifted to the private sector[39].

③ Response of foreign firms

Regarding the point that the private sector bears a certain level of financial effect, the overseas corporations tolerate this to a degree. Furthermore, according to a local corporation, regarding contract provisions, in the past in the event of a consultation or disputed point between the public and private sector, generally the opinion of the private sector is accepted.

(4) Tax Change Risk

In principle, as mentioned above changes to the tax system are considered part of law change risk and are borne by the public sector which ordered the project, however, there are exceptions such as the withholding tax on profits and dividends, and there are cases where the business operator must demonstrate that such change has caused a significant effect on income and expenditure, and it is believed that there are cases where in effect the burden is borne by the private sector due to documentation and the commitment of the institution which is party to the contract.

Moreover, it is commonly said that India's tax system is complicated, and moreover the structure and interpretation of local taxes (added value tax, stamp duties, border crossing tax, Octroi) differ greatly between states and in particular, if a project site encompasses more than one state, the interpretation of Octroi between states on the movement of construction materials and raw materials and fuel over state borders is likely to be a significant bottleneck to the drawing up of finance plans[40].

④ Response of foreign firms

Due to the complexity of the Indian tax system, foreign firms utilize tax specialiststo study the optimal business structure and investment scheme.

(5) Termination Risk

Political force majeure and defaults by the Authority are proposed to qualify

[39] Source: A comment from an Indian local construction corporation.
[40] Source: A comment from a Japanese corporation.

for adequate compensatory payments to the Concessionaire and thus guard against any discriminatory or arbitrary action by the Government or the Authority.

In the road sector, the project debt would be fully protected by the Authority in the event of termination, except for two situations, namely, (a) when termination occurs as a result of default by the Concessionaire, 90 per cent of the debt will be protected, and (b) in the event of non-political force majeure such as Act of God (normally covered by insurance), 90 per cent of the debt not covered by insurance will be protected."

(6) Exit Strategy Risk

PPA/Concession agreements generally put some limitation in changes of sponcers as projects provide public services. For example, at National Highway 1 Panipat-Jalandhar Toll Road Project, in accordance with the concession agreement, the concessionaire will not undertake any change in ownership without the prior approval of the NHAI. The concession agreement states that the aggregate holding of the existing promoters consortium members will (i) not decline below 51% during the construction period; (ii) not decline below 33% during a period of 3 years following COD; and (iii) be at least 26% or any lower proportion permitted by the NHAI thereafter until the end of the concession period.

The concession agreement also states that any transfer of ownership leading to acquisition of more than 15% of total equity of the appointed concessionaire or the company holding directly or through one or more companies the equity of the concessionaire, would require the NHAI approval from the national security perspective.

⑤ Response of foreign firms

There was the opinion that, in connection with equity buying/selling of corporations other than that of the company representing the consortium (the largest investment sponsor), application of this is relatively flexible.

Furthermore, there have been actual cases occurring of sponsor changes during the concession term such as a foreign power company entering a power generation project by acquiring equity in another company, or a foreign port operator entering a port terminal project by a corporate acquisition, so while it is necessary to check at the time of drawing up a contract, it is not necessarily the case that exit strategies for all sectors or individual projects are restricted, or that project participation in Brownfield by capital buyout of existing business is restricted.

(7) Financing risk

Generally, the domestic finance market in India is very positive towards the supply of funds to the infrastructure market, and large scale infrastructure finance is supplied by Indian domestic major commercial banks with SBI and ICICI at the core, and the finance market capacity is still seen as high.

However, while there are public finance institutions, such as IIFCL, PFC and IREDA, which supply long term finance to infrastructure projects, the maximum length for long term financing which could be procured is fifteen years, and the ratio of finance term in India to PPP project term is below the 50% level which is significantly lower than the international standard of 80-90%[41]; and it could be said that the procurement of sufficient long term finance required for project stability is difficult.

Furthermore, the sectors to which Indian commercial banks supply finance are limited to the power, road and airport businesses, or relatively profitable businesses in regions where it is easy to organize. In addition, particularly in regard to the power and highway sectors, the exposure of large banks such as SBI is nearly reaching the sector cap (15%) of each bank, and some people have expressed the opinion that the future of continuous finance procurement is in danger.

In response, the Indian authorities are trying to diversify finance sources and increase liquidity in the finance market through refinancing of existing projects by IIFCL as mentioned in Chapter One and through procurement of foreign capital by IIFCL UK. However, the effectiveness of these measures from the time of their implementation until now, has not reached the level anticipated by the Indian side including IIFCL, and depending on the success of further expansion of these existing schemes or the IIDF (India Infrastructure Debt Fund) under creation, it is possible that in the near future sustainable infrastructure finance could be in danger.

Furthermore, in connection with procurement of finance from overseas by business corporations, there are restrictions such as the so-called ECB (External Commercial Borrowing) regulations, or Foreign Exchange Control Law and related regulations and guidelines. These mean that there are a number of restrictions imposed by the authorities (especially RBI) in connection with loans with an average remaining period of over three years, taken out by corporations with a presence in India from overseas financial institutions etc., including restrictions on use of these funds, loan period and interest rate conditions etc.

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[41] Source: A comment from an Indian public financial institution.

However, regarding ECB for infrastructure investment etc., the following special measures are permitted, and restrictions are fewer than those on manufacturing industries etc.

- ECB to the infrastructure sector is permitted with either automatic or individual approval by RBI. (It is not prohibited.)
- In September 2008, the upper limit of loans from external commercial borrowing (ECB) by infrastructure related corporations was raised from the former one hundred million US dollars per financial year to five hundred million US dollars[42]. At the same time, for rupee denominated expenses, the average borrowing period for ECB loans exceeding one hundred million US dollars shall be over seven years.
- From February 2010, in conjunction with the establishment of the IFC (Infrastructure Finance Corporation) automatic approval of RBI shall be applied to investment and lending of up to 50% of their net worth by non-bank institutions with IFC licenses.

⑥ Response of foreign firms

Regarding large leading companies, finance procurement is implemented under corporate financial risk management. For five to ten year periods, this is fixed under project finance, however otherwise they utilize their own capital or refinancing. On the other hand, small to medium sized companies often have difficulty with finance procurement.

Furthermore, in India loans for infrastructure businesses in principle have variable interest rates and basically the private sector business bears the risk associated with interest rate fluctuations. While there are interest swaps of up to ten year periods in the market, as the market interest rate is high at around 10%, there are also Indian local sponsors who dare not fix. Also, the average term of bonds issued by non-bank financial institutions such as IDFC is short, at three to five years, so it is believed that it is in effect not easy to fix long term interest.

(8) Risk related to land acquisition and expropriation

As a rule, acquisition and expropriation of project land is the responsibility of the public side in almost all project sectors, and acquisition must be partially completed before the conclusion of the loan agreement. In the event that land expropriation is delayed for reasons on the part of the public side, the public side shall provide the necessary proposals to private operators, such as an extension of the project period. An exception to this exists in the power-generation business. The two bidding methods under the 2003 Electricity Act are explained as follows:

[42] Source: RBI CircularNo.16

the burden of land expropriation may be placed on private sector side in Case I, where the party making the order does not clearly specify the type of raw fuel or power-generating station site, in Case II where the party making the order does specify the above and for which the period of power purchase is less than seven years, and for recyclable energy projects,[43]

– Handing over possession of at least 80 per cent of the required land and obtaining of environmental clearances are being proposed as conditions precedent to be satisfied by the Authority before financial close.

Standardization of rules and regulations related to the handling of land expropriation risk is most advanced in the expressway project under the jurisdiction of NHAI, and 85% of land expropriation must be completed by the conclusion of the concession agreement. Should the remaining 20% of land expropriation be behind schedule beyond 91 days from the conclusion of the concession agreement, MCA stipulates that NHAI shall pay to the private sector operator the penalty of 50 rupees per 1,000m^2 of non-expropriated land area for each day of delay.

While land expropriation is the responsibility of the government agency, it is common for residents to have a strong sense of entitlement; and, coupled with complicated land ownership in India, land expropriation is not an easy task. There are many cases of a delay in land acquisition causing a delay in projects.

Particularly for subway, industrial complex and city development projects aiming for the commercial development of areas near the project site, completion of land expropriation is a significant factor in whether the project will succeed or fail. In the case of Mumbai metro, the Marharashtra government established a specific schedule for the progress of land expropriation at the time of bid tender; however, due to the extremely complicated land rights and ownership in the Mumbai city area, land expropriation that remained after acquisition of private lands led to a large number of lawsuits, resulting in a significant delay in construction. In the case of the cloister development project in Bangalore/Mysore, Karnataka, the plan was to lay an arterial road, construct an industrial complex and move along with urban development along the arterial road; however, an environmental group reacted vigorously and brought suit claiming that land expropriation related to the industrial complex and urban development lacked public benefit. Seven years after the commencement of land expropriation, the

[43] However, in acknowledgement that this point is preventing private sector investment in power-generating operations in India, the UMPP (Ultra Mega Power Plant) project current in progress through India, the party ordering the work should have completed the expropriation of land before the public announce of RFQ/RFP.

acquisition of land required for the project was not complete. When private sector enterprises intend to participate in the PPP project in the field of infrastructure, it is of utmost importance to ascertain (a) the land expropriation status and future prospect at the time of bidding, (b) requirements for land expropriation (mechanisms that determine land expropriation prices, guidelines for presenting the reasons for expropriation), and (c) reparation agreements when there is a delay in expropriation.

(9) Risks related to acquisition of approvals and licenses for environment and investment

As a rule, obtaining the approvals and licenses required for projects such as approvals related to environmental issues, from the central government (Ministry of Environment and Forest) and for Right of Way, is the responsibility of the public sector side and should be completed before the conclusion of the loan contract. However, environmental approval for recyclable energy projects and acquisition of right of way for transmission of electric energy that are often not considered PPT projects but private sector projects, support is provided by the public sector side and the responsibility is considered to be that of the private sector operators.

Moreover, there are also some cases of delay in obtaining approvals and licenses due to the insufficient administrative power of the project executing agency that is to obtain permission for projects under the jurisdiction of the state or the municipality. One example is the Chennai desalination project that will be explained later, in which the conflict between the central and regional governments is causing a delay in acquisition of approvals and licenses. Caution is required for southern states, such as Tamil Nadu and Kerala, where political conflict with central government exists due to different ethnic groups, languages and cultures.

Additional bottleneck specific to overseas enterprises is the complicated procedure for approvals and licenses to establish local corporations and to accept investment. Major restrictions on investment that general foreign-affiliated enterprises in India will face are the three points listed below:

- FIPB Approval for direct investment to India: permission for direct investment to India by FIPB (Foreign Investment Promotion Board) tends to require an extended period of time, with some cases taking as long as two years.
- Regulations for stock transactions by RBI: In order for foreign-affiliated enterprises to obtain stock of local enterprises in India, or transfer Indian stock to a third person, the price of the stock must exceed the market price in line with the stock evaluation guidelines designated by the RBI and SEBI (Securities and Exchange Board of India) and approval is required from the RBI.
- NOC Regulation: NOC regulation (Non Objection Certificate Regulation) established by Indian Corporate Law stipulates that foreign-affiliated enterprises

that have already merged, or that have concluded agreements for technical cooperation and/or trademarks with Indian enterprises must obtain approval from the corporation with which agreement is tied when establishing a new company or entering new contracts in the same category of business. The revision in January 2005 has led to some easing in that the regulation does not apply to foreign-affiliated enterprises newly entering India unless otherwise noted in the contract; however, there is little merit for enterprises already doing business in India.

Due to the above regulations, there are presumed to be cases in which the execution of a smooth exit strategy is difficult, and because the legal system is as yet immature in India, construction plans need to be long-term, with a risk of a prolonged time until closure.

There are exceptions to these complicated approval and license procedures for UMPP projects and projects in the DMIC regions, which stipulate that the party ordering the work set up an SPV and be the responsible party in obtaining the necessary approvals and licenses.

(10) Utilities / Infrastructure Development Risk

It is generally not defined as standard contractual commitments for associated infrastructure, sutilities including power, water and wastewater, and connectivities with roads/railways to be developed in time.

Especially, in a port sector, many developers have to resort to doing connected roads / rail on their own, since transport infrastructure around container terminals are usually not developed. Railway operators are included in some cases as a consortium menmbers. There are some cases that utilities and local infrastructure have not been developed by the time of RFP announcement and it can be the risk for the delay of the project.

On hte other hand, the good example is Hyderabad Airport, where the Govt built an elevated expressway to provide connectivity to the city. However, the development of utility and connectivity infrastructure usually can be one of the biggest bottlenecks.

⑦ Response by the overseas enterprises

Each project is handled differently. For example, in cases that present possibilities for future development, such as a large-scale port construction, cost-effectiveness is considered and private consortiums proactively ensure connectivity to avoid delay in the preparation of the project due to the public sector side.

(11) Fuel Supply Risk

Securing fuel supply is important for utility projects such as power generation and bulk

water supply which receive availavility payments.

One bottleneck, in particular, when overseas enterprises aim to participate in power-generation operations with domestic coal as raw fuel, is ensuring the supply of domestic coal. In the model FSA formulated by CIL (Coal India Limited) in 2008, CIL and related public corporations promised the supply of coal for five years from the effective date of the agreement to the party the contract was concluded; however, for the years thereafter, the contract stipulates that the coal is to be supplied only when agreed to by both parties, which is presenting a significant problem for even domestic enterprises in India in ensuring supply of coal for the common 25-year period of power purchase for coal-fueled power generation operations. Power generation operations are, as a rule, under the jurisdiction of the state government, yet domestic coal is under the jurisdiction of the Ministry of Coal of the central government. For operators that have poor relationships with the central government, contracts for the supply of coal are extremely difficult to conclude. Even if the operator succeeds in receiving affirmation for the supply of coal on paper, with the high demand for coal from domestic companies, supply to ill-connected foreign-affiliated enterprises is placed at the lowest priority with a high possibility that the promised supply will not be delivered. For this reason, when foreign-affiliated enterprises conduct power generating operation in India, recyclable energy (mainly solar and wind power energy) would be a better choice for a steady supply as long as weather permits.[44]

According to the FSA model of the above-mentioned CIL, the CIL and its affiliate companies have the obligation to sell the specified amount of coal at the agreed price, and penalties are imposed when the seller is not able to supply as promise under the put or pay contract. The standard penalty under the 2008 FSA model is 50% of the scheduled supply; however, the new 2011 FSA model raised the penalty to 90%, setting a strict standard article in the coal supply contract.[45]

⑧ ① Response by overseas enterprises

Assuring long-term contracts for the supply of domestic coal requires full knowledge of the status and customs of the specific locale, and the concluding of contracts independently is considered difficult. Most overseas enterprises work together with the local partners.

(12) Demand/Ridership Risk

[44] Source: Interviews conducted with foreign-affiliated enterprises
[45] However, the power generation operator side is also obliged with the take and pay contract under the same standard as the coal supply transaction.

In transport projects, the principle is that traffic risk would be borne by the concessionaire, The Concessionaire shall have sole and exclusive right to demand, collect and appropriate fee (tolls) from the highway users

The MCA provides for a target traffic growth and stipulates an increase of upto 20 per cent in the concession period if the growth rate is lower than projected.

Guarantees have also been provided to protect the Concessionaire from construction of competing roads, which can upset the revenue streams of the project. Additional tollways would be allowed, but only after a specified period and upon compensation to the Concessionaire by way of an extended concession period. During the Concession Period, if the realisable fee falls short due to a political event or indirect political event or Authority's default, upon specific request by the Concessionaire, the Authority to provide a loan to meet such a shortfall at an interest rate of 2% above bank rate (Revenue Shortfall Loan)

Off-take guarantees and/or minimum guranttee of the revenues, however, are not applicable and adjustment of concession period is the measure to be taken for the private sector without immediate cash revenues.[46]

Furthermore, should there be provisions regulating the construction of competitive roads near the project area, the project execution agency would not have a say in regulation as this would be out of its jurisdiction. There are some cases in which provision itself is not effective. For example, in the case of Kakinada Port (minor port) in Andhra Pradesh, Gangavaram Port (major port) and Krishnapatnam Port (minor port) construction significantly affected the transaction volume at Kakinada Port.

⑨ ① Responses by overseas enterprises

From the perspective of enterprises in India, risk on demand for highways, for example, is considered an allowable risk in view of the growth of the nation and region. On the other hand, for the port sector, in particular, transaction volume is significantly affected by external economic factors, making it difficult to indicate the kind of steady cash flow that would satisfy lenders. There are many cases in which participation and financing from overseas enterprises in the domestic project became difficult, with the exception of enterprises with well-known achievements worldwide or large Indian enterprises that are able to procure funds from commercial banks under corporate risk.[47]

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[46] As an exception, in the event of shortfall in expected balance on the part of the public side, short-term loan to cover the shortfall may be provided by project executing party at the rate of RBI standard interest +2%, based on the suggestion by the Concessionaire.
[47] Source: Interviews conducted with Japanese enterprises.

(13) Violation of Contract Fulfillment and Nonpayment Risk (Offtake Risk) by the Government/Government Agencies

In principle, in utilities businesses such as power generation and bulk water supply and in the annuity-type transport infrastructure business, private businesses with a system of enabling to supply project assets and services are guaranteed with a project income in the form of "take-or-pay" in which they can be stably paid from the offtaker or the counterparty organization, regardless of the actual amount of service demands.

However, even payments are made on a "take-or-pay" basis as mentioned above, payments have been delayed in the fields of electric power and water where the offtakers are state govermnets and municipalities. Furthermore, it is said that risk sharing among several offtakers, which is often seen in the power generation sector, and the third-party sale of electric power by merchant plants have not been well functioning due to the shortage in grid systems and the absence of markets.

In addition, many private companies including foreign companies tend to add the ability of relevant offtakers in fulfilling liabilities to due diligence[48] and request the debt guarantee by the state governments or the central government for credit enhancement of the offtaker, SEB; in India, however, accounting of the contingent debt that is incurred by the debt guarantee made by the central government for the state governments is significantly restricted based on the FRBM (Fiscal Reponsibility and Budget Management) law, and is not necesarrily effective. Meanwhile, for the Chennai seawater desalination business which is described later, profitability is kept by strong social and political needs towards the business and by having industries as a customer, although the state government makes credit enhancement for the Chennai metropolitan water authority, which is the business operator. In addition, the state government has taken measures for credit protection such as the issuance of L/C to appropriate payments in several times and the conclusion of escrow agreements.

4.2 The Bottleneck in Business Formation and Bidding System

4.2.1. Business Formation and Management Ability of Business Operators

It is important for the planning and project composition of the PPP business that the business operator should retain a definite objective and intention for promotion of the business as a public sector, diligently investigate and well

[48] As for the electric power sector, the Ministry of Electricity of the central government announced the ratings in 2006, based on business performances prepared by each SEB (State Electricity Board, the Electricity Agency of each state government).

understand the business risks, and have an ability to determine the roles of public and private sectors and risk sharing among them.

The most experienced business operator with excellent abilities in India is NHAI, which has been actively exploiting the PPP business from the beginning of the Indian PPP infrastructure business, and the fundamental concept of the Indian PPP infrastructure business has been developed mostly based on the knowledge obtained from the highway construction business under the control of NHAI.

On the other hand, in the sectors such as city infrastructure which will be promoting the PPP business in the future, there may be a bottleneck against the business promotion because the orderer is less experienced, and due diligence of the business, review of the structure, and management of bidding procedures may not be smoothly carried out. For example, in the field of water in which ULBs (Urban Local Bodies) are generally designated as a business operator, especially in the water project having seriously uncertain social and economic factors, there may be a bottleneck against the promotion through private investments, because of people's low payment ability and generally low business profitability; furthermore, because of a low ability of ULBs as the business operator in project formation and because of inadequacies in due diligence for the existing assets, disclosure of the financial status, review of the business structure, management of bidding procedures, appropriate monitoring after the start of the business, and response ability for not postulated events. Delay in bidding procedures may also increase the cost of tenderers.

When a business operator requests investments from private companies including foreign ones, building of an appropriate business structure and management of bidding procedures are required with the risk acceptability of these companies considered, and assistances are required to supplement the ability of municipalities and public corporations as a business operator.

In addition, it is thought that in setting the level for business requirements and the business scope, motivations of private companies for participation can be enhanced by actively employing their originality and ingenuity. For example, the companies participating in the highway construction business view that there may be few chances for employing originality and ingenuity of private companies because of the established level for business requirements. Also, especially in the development of industrial parks and cities, the mechanism of granting a comprehensive business right for the development of multiple infrastructure areas is not common, and in many cases private businesses are forced to acquire a business right for each infrastructure. This is another bottleneck for the

Japanese companies which are aiming at the export of infrastructure as a comprehensive system, such as the "Smart Community"[49].

4.2.2. Bidding System

In India, the bidding system for the PPP infrastructure business focuses on the transparency in procurement and is designed to select a bidder who has price competitiveness in the financial examination, for example, who proposes the lowest bidding cost, although technological achievements are also evaluated in the qualification examination. This system, however, is one of the disincentives for foreign companies to participate in projects, which are less competitive in costs compared with the Indian companies as well as EPC companies in China and Korea, even if they are superior in technologies[50].

According to the guideline on the PPP project procurements published by the Planning Commission[51], the PPP business in India should in principle, regardless of sectors, adopt a competitive bidding method composed of two stages: (1) the RFQ stage in which a qualification examination is conducted for evaluating bidders' technological capabilities and financial capacity, and (2) the RFP stage in which only the bidders who passed the RFQ stage are qualified to present a business proposal. A comprehensive evaluation method is not adopted. Among the bidders who have passed the qualification examination in (1), a bidder is selected who has proposed the best pricing condition in the business proposal in (2).

Meanwhile, there are also negotiation procedures without competition (Negotiated (MoU)) or methods based on proposals by business operators (Unsolicited (Swiss Challenge)) such as in Andhra Pradesh, Bahir, Punjab, Gujarat, Karnataka; however, such cases are limited[52]. Procedures for proposals are applied for proposals with originality or complex businesses; the examples include the Port-based Corridor Development in Andhra Pradesh, the shipyard development and hydroelectric power generation business in Gujarat, and the highway-based corridor urban development project in Karnataka. However, since JICA has been developing only a few standard documents and precedented cases are limited, it must be kept in mind that a negotiaion period might be

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[49] According to interviews given to Japanese companies.

[50] According to local hearings, there were many comments that the prices proposed by Japanese companies are high, although their technological capabilities are highly appreciated. On the other hand, several Japanese companies and some local engineering companies in India which have considered to go into partnership with a Japanese company commented that companies with experiences in local production in developing countries other than India are not necessarily less competitive in prices.

[51] (Power Transmission); MCA for Transmission of Electricity; (Road); MCA for National Highways; (Subway); MCA for Urban Rail Transit Systems; (Ports and Harbors); MCA for Ports; (PQ) Model Request for Qualification Document (RFQ) for PPP projects; (Financial Bidding) Model Request for Proposal (RFP) for PPP projects.

[52] According to the PPP India Database, projects without competitive bidding account for about 10% of the total (45 cases out of 504). (Limited to the projects whose data of procuring methods is available in the database)

prolonged for conditions on details of business implementation[53].

(1) Preliminary Qualification Examination Stage (RFQ stage)

⑩ The number of Bidders Passed the Examination

The number of bidders and the bidders who have passed the qualification examination greatly vary depending on the nature of the project based on the risk sharing framework. In principle, to secure a sufficiently price-competitive environment in the RFP stage, the requirements and evaluation criteria for the preliminary qualification examination are determined depending on the business characteristics so that 6 to 7 companies out of bidders can pass the RFQ stage.

⑪ Amount of Investment in Consortium Required for Examinees

According to the standard bidding documents, only the companies which commit the amount of investment exceeding a certain level are qualified among the consortium members to undergo the technological examination in the RFQ stage. The requirements for this purpose include (a) contribution of more than 26% of the whole investments in the consortium, and (b) commitment of investment in the amount of more than 5% of the total business expenses for 2 years since the start of business.

Generally, one of the main purposes for Indican companies to form a partnership with a foreign company is to improve evaluations in the RFQ stage through assistances from foreign companies with abundant overseas business achievements and advanced technological capabilities. Taking it into account, foreign companies are also required to involve to a certain extent. However, this requirement is not necessarily applied to all PPP projects. In the case shortage is assumed in technology and achievements when only Indian companies are involved, such as in the subway project, certain measures are taken to evaluate the achievements made by a foreign company even if the investment ratio of the foreign company obviously falls below the aforementioned committed investment ratio.

⑫ Evaluation of Technological Capabilities

In principle, technological capabilities are evaluated only as qualification requirements in the RFQ stage. The companies satisfying the evaluation requirements are assessed in terms of the BOT/BOLT/BOOT business performances, the achievements in EPC orders received, and the achievements in O&M in similar business areas for the last five years.

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[53] According to hearings given to Japanese companies, there are some cases in which proposals from private companies have practically been left ignored, so supports from JICA will encourage the state governments also in terms of system operation.

In addition, business performances in advanced countries are also evaluated to a certain extent. In the sectors with less PPP business achievements in India, it is considered that foreign companies with overseas achievements in PPP of the same sector are advantageous. In case it is unclear whether the actual business performances in advanced countries are directly evaluated as the implementation ability of infrastructure businesses in India, the business performances in OECD nations may be multiplied by 0.5.

(2) Price Proposition Stage (RFP stage)

⑬ Evaluation Criteria for Price Proposition

In principle, the selection criteria for a successful bidder in the RFP stage include the minimum costs and fees proposed by the bidder, the minimum subsidies from public sectors, or the maximum premium payment for the public sectors.

The evaluation criteria for price bidding in the RFP stage depends on the structure and business profitability of each sector and each business. Figure 4-1 shows the constituent ratio of the evaluation criteria for price proposition in major sectors, which was extracted from the PPP India Database. The major evaluation criteria are classified into the following three types.

Figure 4-1 Comparison of Price Bidding Methods for Each Sector (Reappeared)
(Source: PPP India Database)

– Minimum costs/fees proposed: in principle, this evaluation criateria is mainly applied to the utilities sector including electric power and water in which a fixed amount payment (annuity type) is primarily made.
– Minimum subsidies from the government: in principle, this evaluation criteria is mainly applied to the projects such as highway construction and waste disposal in

which a sufficiently bankable project can be established for private business operators on a stand-alone basis by collecting fees from end-users, as long as the initial capital investment can be covered.

– Maximum premium payment to the government: in principle, this evaluation criteria is mainly applied to the projects such as subway, industrial parks, and urban development in which incomes on a commercial basis can be expected by exploiting ancillary business rights for such as real estate development, despite an unstable business revenues.

As seen from the aforementioned, the final successful bidder is determined based on price elements, resulting in a big bottleneck to foreign companies including the Japanese ones. Furthermore, improvements must be made in competitiveness in the initial investments, even when evaluations based on the lifecycle costs would be conducted.

However, the bidding system in India tends to give weight to the transparency in selection procedures, and it may be unlikely that significant changes will be made in the selection method, although an evaluation method would be devised so that technological capabilities in the RFQ stage and technological proposals made in the RFP stage can be more highly appreciated[54].

⑭ Technological Proposals in the RFP Stage

In the case of complicated business contents, which may be exceptional, detailed proposals on the business can be accepted which were prepared by the companies having passed the qualification examination based on the intention of the counterparty organization. This detailed proposals, however, are adopted only for finalizing the RFP, and not for bidding evaluation.

4.2.3. Collection of Information on Systems and Projects of Individual States

Since the development status of PPP systems and implementing agencies is different in each state, information on the leagal system, procedures, and candidate projects must be collected. In case foreign companies attempt to participate in the PPP businesses, collaborations with local partners and specialists must be arranged for establishing as a counterparty of a consortium, and information must promptly be collected.

This type of information has been extensively provided in the DMIC region where projects have been proceeded based on the agreements between governments, and part of licensing procedures has been integrated into a public corporation responsible for licensing. It is expected that necessary information

[54] According to comments provided by many central state government agencies in India.

should be provided to business operators by sharing information between governments including other government agencies.

4.3 Case Study on Foreign Companies Participation on India PPP Infrastructure

4.3.1. Water: Chennai Desalication Project（Foreign Company: Befesa (Sapin), Indian Company: IVRCL, Tmil Nadu[55]）[56] [57] [58] [59] [60] [61]

(1) Project Summary

Chennai, a city with a population of over four million people is one of the most water stressed cities of India. Rapid population growth along with increasing pace of urbanization has exacerbated the gap between supply and demand of water. The water needs of the city are met primarily from surface water resources from reservoirs and lakes and supplemented through ground water. As per estimates by Chennai Metro Water Supply and Sewerage Board (CMWSSB), despite implementation of the Telugu Ganga stage-II, there was likely to be a gap of 405 MLD by 2011-12 (approximately 27% of the demand). While Chennai city was implementing several water conservation measures, the scarcity in availability of water had to be addressed through augmentation of supply.

It was in this context that the city turned to an alternative source - sea water. Given the geographical location along the Bay of Bengal, Chennai is well placed to utilise this resource. The desalination project was announced by Government of Tamil Nadu in 2003 and CMWSSB was tasked with the responsibility to undertake this project. CMWSSB is responsible for water supply and sewerage services in Chennai. The initial cost was estimated at Rs. 1500 crore for a 100 MLD treatment plant. CMWSSB decided to set up a 100 MLD desalination plant at Minjur some 35 Km North of Chennai on a Design Build Own Operate & Transfer (DBOOT) basis.

After a prolonged bidding process which was conducted thrice, the project was finally awarded to the consortium consisting of IVRCL Infrastructures & Projects Ltd., (IVRCL) and Befesa Construccion Y Tecnologia Ambiental S.A.U. (Befesa CTA) for a period of 25 years. CMWSSB conducted an International Competitive Bidding (ICB) process based on the criteria of lowest levelized tariff rate quoted for 1KL for supplying desalinated water.

As per the Bulk Water Purchase Agreement (BWPA), CMWSSB is to purchase water from the CWDL at a cost of INR 48.66/m^3 which will be sold to industries at a rate of INR 60.0/m^3. At the end of the 25-year agreement, the plant will be

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[55] Original title: 100 MLD Sea Water Desalination PlantÂ Reverse Osmosis (Befesa Agua with IVRCL, Tamil Nadu)
[56] Source: Presentation at Singapore International Water Week by CMWWSB
[57] Source: Press Release No.452 by Government of Tamil Nadu
[58] Source:" Fifth National Report of the Government of the Federal Republic of Germany (Fifth National Communication" by UNFCCC
[59] Source: List of Clearance on the CWDL website
[60] Source: the article "Chennai desal clears hurdle" by Global Water Intelligence
[61] Source: PPP India Database

transferred to the state government. The rate structure to purchase water was INR 48.7/m^3, which was assumed at the end of bidding. However, as a result of re-negotiation after the regime change which occurred in the state government of Tamil Nadu in 2008, a variable charge system was established which varies depending on a capacity charge of approx. INR 16/ m^3[62], the net volume of water transmission and electric power consumption, and the wholesale price index (WPI).

(2) Profile of Foreign Company

Befesa (Befesa Agua SAU) is a subsidiary company of Abengoa S.A. Spanish Engineering company, which is offering water treatment services including desalination project and industrial-waste disposal services not only in Spain, and also 20 countries in China, Central and South America and North Africa as an international water treatment business.

This is the first project for Befesa to offer PPP service in India.

(3) PPP Project Structure and Role of Foreign Company

The Project is structured as DBOOT (Design-Built-Own-Operation-Transfer). IVRCL is a BSE listed technology, engineering and construction company and Befesa CTA is a wholly owned subsidiary of Befesa Medio Ambiente S.A (Befesa), an engineering & construction company listed with the Madrid Stock Exchange. They jointly promoted a Special Purpose Vehicle (SPV) Chennai Water Desalination Limited (CWDL) for developing the 100 MLD Sea Water Desalination Plant on 60 acres land leased by CMWSSB at Kattupalli village in Minjur.

The basic project structure is depicted in Figure 4-2. IVRCL is in charge of civil and strucural EPC and O&M, and Befesa was in charge of mechanical and techcnial EPC based on its technology and know-how in overseas.

[62] The reference value was calculated as Rs.15.9/m^3 by converting \$0.36/m^3 using USD/INR=44.17.

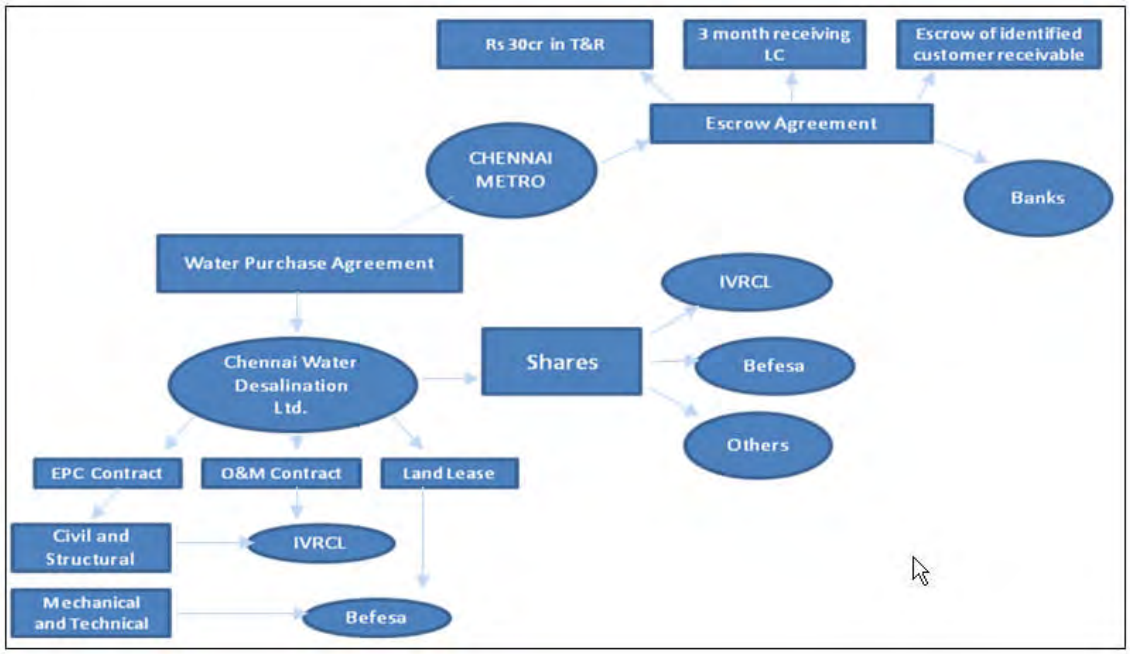

Figure 4-2 Project Structure of CWDL
(Source: CWDL website)

Being the largest desalination plant in India (as well as in South Asia) and Chennai's first seawater desalination facility, several initiatives were taken to make it a successful venture. Since water is a politically "sensitive" issue, one of the major risks involved for the private developer was commercial risk and ability to generate sufficient revenues to cover the project costs. Thus, to make the project commercially viable and generate private interest, the project was awarded on the annuity model. One of the key features of the Bulk Water Purchase Agreement (BWPA) is that for all the activities undertaken by the concessionaire, it is assured of a minimum guaranteed offtake of 95MLD by CMWSSB. The concessionaire will receive income through fixed and variable payment modes, with the variable charge being linked to Wholesale Price Index (WPI). Also, the project has three tiered payment security mechanism, including an escrow agreement, issue of L/C and a State support agreement from the Tamil Nadu Government.

(4) Financial Related Matters

The financial information of this project based on the financing agreement made in January 2007 is shown in Table 4-2. To cover enormous amount of initial capital investment required by improvement and construction with high technology such as desalination plant, a lot of public funding programs such as concessional loan for JNNRUM scheme and VGF by CMWSSB are used and compensate business profitability.

Table 4-2 Financial information of CWDL

Item	Amount (crore)
Investments	122.00
IVRCL (76%)	93.00
BEFESA (24%)	29.00
Debt loan (Canara, UBI, IOB, DEG)	378.00
Public funding of JNNRUM scheme	98.50
Aid fund of central government	65.85
Aid fund of Tamil Nadu State government	9.87
Concessional loan of CMWSSB	19.06
（Of them, 4.39 crore is tied loan with TUFIDCO[63]）	
ASIOE[64] fund	3.72
VGF amount provided by CMWSSB	60.00
Total amount of funding	658.50
Debt: Investment ratio	60%:40%
Public: Private fund ratio	20%:80%

(Source: PPP India Database)

(5) Project Process

The chronological order of the project development including bidding process is as follows:-

Figure 4-3 Implementation Procedure of Chennai Desalination Project

(Source: prepared by Study Team referring various sources)

It took 7 years from the project announcement to the start of service because of many obstructive factors; it was an unprecedented advanced project in water treatment business of which PPP has a poor record, the project was administered

[63] TUFIDCL：Tamil Nadu Urban Finance & Infrastructure Development Corporation Limited
[64] ASIOE：Associated Support Items of Equipment

by state government which hasn't kept good relation with central government and a change of state government took place during the project implementing, natural disasters occurred during construction stage.

It took almost two years to the award the project. The tenders were invited twice in 2003. In the first instance, though 26 firms purchased tender applications, only two submitted the documents. These were found to be deficient in terms of the procedural requirements as they were not accompanied by Earnest Money Deposit (EMD). During the second time around, while three bids were received, two of those could not be opened due to absence of EMD and the third bid was also rejected after scrutiny. This led to inviting tenders for the third time. Besides, the two stage bidding process was made more exhaustive by CMWSSB employing the services of an external agency to manage the bid process.

Two years later, the third bid was invited and five tenders passed RFQ stage: IVRCL-Befesa, Shriram(India)-Hyflux(Singapore), IMC(India)-Caramondani (Cyprus), Reliance(India)-IDE Technologies(Israel), L&T(India)-Degremont (France). These five tenders proposed that the leveled water supply price (levelized tariff) for 25 year project period be an evaluation standard. Then, IVRCL-Befesa consortium made a successful tender of 48.7 rupee/m^3 that was the lowest.

However, it took a year and a half for loan agreement after closing tenders because of belated licensing process. One reason behind this is that Tamil Nadu State Government was opposed to central government politically and therefore, environment licensing procedure which the central government issues was belated.

The construction of the desalination plants had been started since 2007 after completing funding. However, a change in political power took place in Tamil Nadu State Government in 2008 and many approval procedures issued by state government were delayed and the project was also delayed. But IVRCL which was local sponsor had paid about 200 million dollars by that time and continued negotiation with local government.

As a result of the effort, the new Tamil Nadu State Government agreed to hold negotiations with CWDL and entered the initial agreement based on the new price system which was very similar to IPP project and had two types of charges (capacity charge and variable charge). Then, it launched resumption of the project.

However, the project assets including the desalination plant which was nearly

finished were damaged by Cyclone Nisha developed in October 2008. In addition, other environmental approvals were required because of the national disaster and the project was delayed again. The lack of fund caused from the cost over run was covered by sponsors' additional investments based on loan agreement. Eventually, the service of project started at the end of July, 2010.

(6) Main Risk Allocation

- Price fluctuation risk…Private/Public
  - Price fluctuation risk in the operation stage is passed on to CMWSSB (off taker) because variable charge works with wholesale price index (WPI).
- Foreign currency risk…Private
  - The price proposal based on rupee-denominated levelled water supply price (levelized tariff) is the tender evaluative standard in RFP stage. Therefore, it is assumed that at least Tamil Nadu State Government/CMWSSB don't bear the foreign currency risk.
- Legal/license/tax system change risk…Virtually private
  - Considering the standard agreement procedures in power business, public has to bear the risk according to the concession agreement. However, number of licensing approvals was added after the natural disaster (Cyclone Nisha) and the cost overrun of licensing procedures was covered by sponsor's additional investment. Therefore, the private side bears the risk virtually.
- Land acquisition/land condemnation risk…Public
  - The land acquisition for the project is to be done by CMWSSB.
- Environmental licensing risk…Public/Private
  - Considering the standard agreement procedures in power business, public has to bear the risk according to the concession agreement. However, number of licensing approvals was added after the natural disaster (Cyclone Nisha) and the cost overrun of licensing procedures was covered by sponsor's additional investment. Therefore, the private side bears the risk virtually.
- Utility/connectivity risk…Public
  - The small power plant with 110 kV/22 kV for auxiliary power supply of desalination plant is maintained by TNEB (Tamil Nadu Electricity Board) and 23.3 km of the

water intake system from the coast to the desalination plant is controlled by CMWSSB.

- Raw fuel supply risk…Mainly Public

  - Variable charge reflects in quantity of water transmission and consumed power of desalination plant and also works with wholesale price index (WPI). Raw fuel supply risk is passed on to the levelized tariff as the variable charge.

- Off take risk (Breach of contract, non-payment risk by government/government agency)…Public

  - To cover the off take risk by ULBs (Urban Local Bodies), whose risk is high in general, the following measures are prepared. (a) Tamil Nadu State Government guarantees a debt to CMWSSB, (b) L/C (Letter of Credits) for three months levelized tariff and (c) Escrow agreement between lender and CMWSSB for terminal water supply price.

- Off take risk (Rider ship risk)…Mainly public

  - There is almost no demand risk for private businesses because of available payment method with 95,000,000 L/day is guaranteed.

(7) Major Notable Matters

-- Forming bankable PPP projects involving high technology based on high needs

PPP water infrastructure projects in India are said to be lagging behind other sectors such as highways development programs due to the low capability of ULBs, which are implementing bodies, in planning PPP projects and the strong social interest in usage fees. However, many schemes to form a bankable project are administered in this project: (1) implementing the double-layered and annuity water purchase fee system with capacity charge and variable charge similar to that of IPP project for power supply; (2) implementing many public supporting schemes, such as public compensation for the negative margin caused by the water price being too high to be affordable for consumers, setting up the credit enhancing mechanism for ULBs, which are the off-takers, and JNNRUM and state government VGF; and (3) the public sector's arrangement of the environment for the project and raw fuel supply.

The background to the situation includes the fact that securing water intake sources is a very important policy target for Chennai, and the ordering party has presumably committed itself to planning a project that is also bankable for foreign companies because India is not internally rich in the high technology and know-how required for seawater desalination. This could be an important point for foreign companies, including Japanese firms, to consider

entering into India's PPP infrastructure building market, where local EPC companies and financial institutions are highly capable compared with other emerging economies, and where a strict two-stage bidding process that values price competition is dominant.

-- Manifestation of the political risk and sponsors' commitment

While there is the bankable project environment mentioned earlier, many political risks that private contractors cannot control became apparent, such as political conflicts between state governments and the central government, power shifts in state governments, and retroactive post-disaster approvals, and eventually it took five years for this project to start after closing the bids. However, thanks to the strong commitment of sponsors, especially IVRCL, a local sponsor in India, these repeated delays to the project were overcome. This suggests that it is important for foreign companies to form partnerships with reliable local firms that have strong connections with local government institutions in planning entry into India's PPP infrastructure projects, especially urban infrastructure projects such as water supply development, whose success is often dependent on political and socioeconomic factors.

4.3.2 Road sector: Panipat-Jalandhar Toll Road Project (Foreign company: Isolux (Spain); Indian company: Soma Enterprise, Haryana-Punjab[65])[66] [67]

(1) Project Summary

Figure 4-4 Project site (Panipat-Jalandhar)

(Source: "Proposed Loan National Highway 1 Panipat–Jalandhar Toll Road Project" ADB)

The Panipat-Jalandhar Section (Figure 4-3), this project site, is the longest section in the fifth phase of the NHDP (National Highways Development Programme), which consists of projects aiming at upgrading the current four-lane highways that connect the four largest cities, Delhi, Mumbai, Chennai, and Kolkata, to six-lane highways.

This program is the first DBFO (Design-Build-Finance-Operate) -based highway project under the NHAI (National Highways Authority of India), and it entrusts detailed designs to private enterprises. The NHAI had done these detailed designs in projects based on BOT (Build-Operate-Transfer), which was the standard in the past.

This program is also the first project under the NHAI to include public-private project revenue-sharing provisions. The bid evaluation criteria at the RFP stage of procurement

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[65] Original title：Panipat-Jalandhar Toll Road Project (Isolux Corsan with Soma Enterprise, Haryana-Punjab)
[66] Source: "Proposed Loan National Highway 1 Panipat–Jalandhar Toll Road Project (India)" by ADB
[67] Source: "Project profile of NH1 (Panipat - Jalandhar Section) Six Laning Highway PPP" from Project Ware by Dealogic

process are based on revenue-sharing ratios proposed by bidders, which means public and private sectors share the revenue risk making the scheme completely different from the past NHAI projects, which employed lump-sum concession fee paid in advance.

(2) Profile of Foreign Company

Isolux (Isolux Corsán) is a large construction and engineering company based in Spain. It is a global enterprise doing businesses in highway construction and power generation and transmission in more than 40 countries, mainly in Latin America and South Asia.

Considering India an important market, Isolux has been doing business aggressively in cooperation with Soma Enterprise, a local Indian company, since 2008, when it established a subsidiary in India. Among others, the highway project under the NHAI is a main business arena. Isolux is in charge of highway concession projects on three sections in total (as of 2009): Maharastra/Gujarat border to Hazira Port Motorway NH-6, and Kishangarh-Ajmer-Beawar Motorway NH-8, as well as Panipat-Jalandhar Motorway NH-1, which is the subject of this paragraph. These are all expansion projects of current highways, which are generally thought to have a lower risk of project incompletion or decrease in demand compared with constructing new highways.

Other than the road sector, Isolux is also active in power transmission and distribution, such as receiving an order for a 1300-kW-class large-scale EPC project from MAHATRANSCO (Maharashtra State Electricity Transmission Company Limited).

Isolux's capacity in India is also highly rated by European and American capital markets. In May, 2011, MSIP (Morgan Stanley Infrastructure Partners) announced its investment of 200 million dollars in a joint venture with Isolux Corsan Concessions, an Indian firm that mainly deals with management of road concession projects. This investment, totaling some 400 million dollars including Isolux's contribution, has been one of the largest foreign direct investments in India's traffic infrastructure sectors in recent years.

(3) PPP project structure and the role of foreign corporations

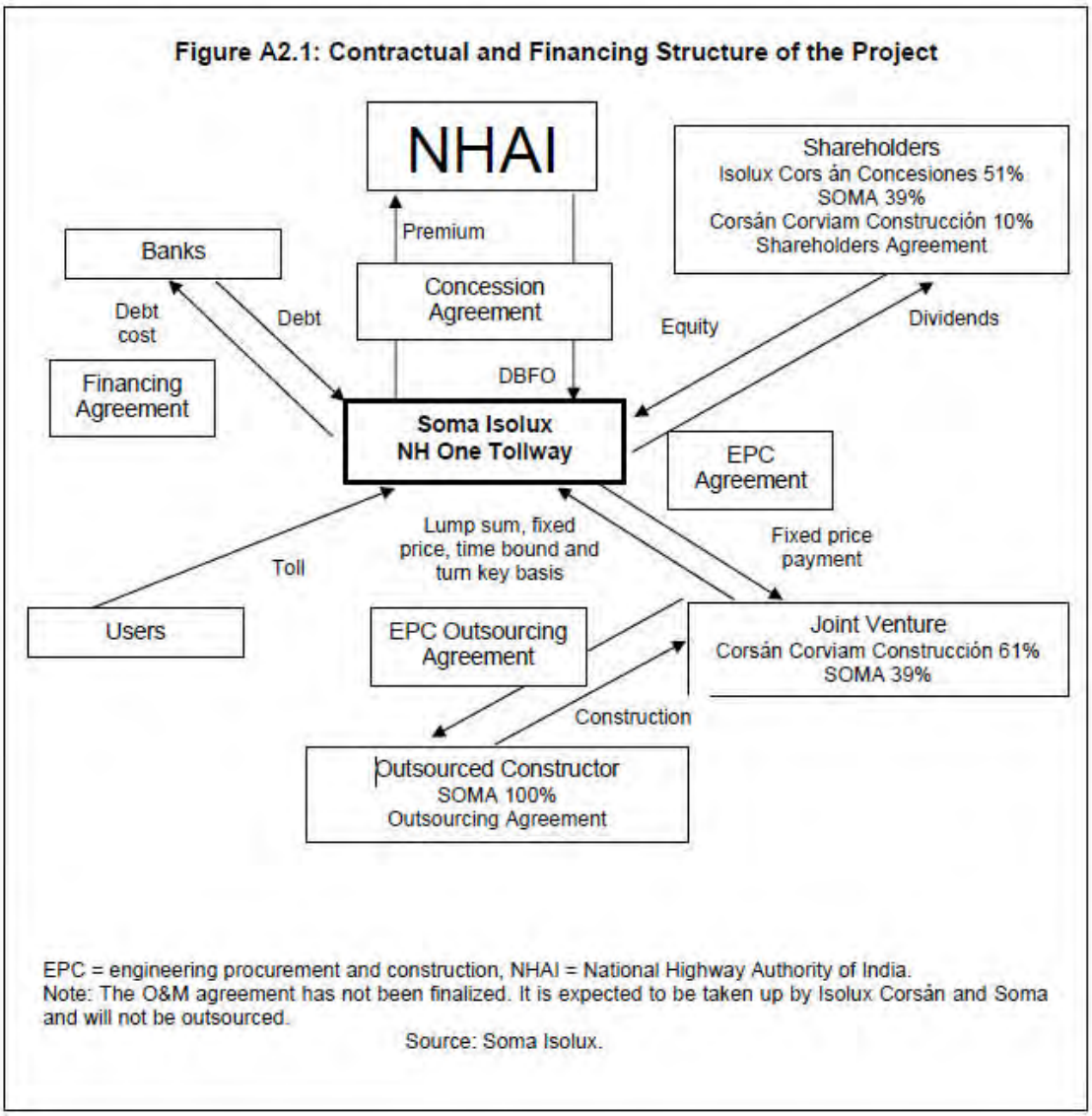

Figure 4-5 PPP Project Structure of NH-1 Tollway

(Source:"Proposed Loan National Highway 1 Panipat–Jalandhar Toll Road Project" ADB)

Figure 4-5 shows the structure of this project. For this project, Isolux (Isolux Corsan Concessions / Corsan Corviam Construction) and Soma set up a joint venture (JV) called Soma Isolux NH One Tollway, and make a DBFO-based, 15-year concession agreement with NHAI. In addition to this JV, Isolux (Corsan Conviam Construction) and Soma set up another JV which provides designing, quality control (QC), and project management, and an EPC contract is made between these two JVs on the premise of lump sum, fixed price, time bound, and turn key (which enable immediate, capacity operation with the trial operation completed within a limited period of time, based on a gross amount by an all-in

contract). Furthermore, Soma makes an EPC outsourcing contract with this EPC-JV. Actual construction management is performed by Soma, which has a sufficient understanding of the local construction environment. Figure 4-5 does not mention any O&M contracts; however, it describes how O&M is expected to be taken up by Isolux and Soma, and hence no outsourcing is assumed.

In addition to tolls paid by users, advertising revenues are authorized as an income source for this project, to be obtained by the display of advertising on project-related resources, provided that such display does not violate the guidelines of MoSRTH (Ministry of Shipping, Road Transport and Highways). In addition, a private enterprise is allowed to receive fees such as usage fees obtained from the existing four-lane roadways immediately after the execution of agreement (before the end of road-widening construction).

Capital contributions through various officially-supported schemes, which are based on capital expenses including VGF, have not been conducted, because the project covers an already-existing zone and there are no problems with regard to either demand or WTP (Willingness to Pay); hence, sufficient and stable project income is expected. On the other hand, the private corporation offers a project profit sharing of 20.14% to NHAI, as submitted by the private corporation itself at the RFP stage. This profit sharing ratio shall be increased by 1% per year.

(4) Finance-related items

Table 4-3 shows information on financing of this project.

Table 4-3 Data on Financing of NH-1 Toll way

1) In dollars $100 million 13-year ADB direct loan	
Period of deferment	Three years
2) In rupees 33,890 million rupees 14-year loan	
Period of deferment	Two and a half years
Redemption count	On quarterly basis, 44 payments
Joint lead bank	State Bank of India
Joint financier group	Allahabad Bank, Bank of Baroda, Canara Bank, Oriental Bank of Commerce, State Bank of Hyderabad, State Bank of Patiala, UCO Bank Ltd, United Bank of India, Andhra Bank, Bank of Maharashtra, Indian Overseas Bank Ltd, State Bank of Bikaner & Jaipur, State Bank of Mysore, State Bank of Travancore, Union Bank of India, Central Bank of India
3) In rupees 11,290 million rupees investment	
Investor	Isolux Corsan Concesiones SA, Soma Enterprise Ltd, Corsan Corviam Construccion SA

(Source: "Project profile of NH1 (Panipat - Jalandhar Section) Six Laning Highway PPP" from Project Ware by Dealogic)

(5) Implementation process of the project

In November, 2006, NHAI announced that it was calling for bids for this project, based on the two-stage international competitive bidding method. At the RFQ stage, bidders were evaluated on the basis of both (a) technical capacity based on past results as a developer/contractor in similar projects and (b) financial capacity based on net assets and surplus. After that, cleared bidders submitted detailed proposals on design. The bidding at the RFP stage was performed on the basis of both the submitted proposals and the revenue-sharing ratio, which was the bidder's commitment to NHAI. In January, 2008, Soma-Isolux consortium won the bid. In May, a concession agreement was made between Soma-Isolux and NHAI.

(6) Main risk sharing workframe

- Inflation risk

  — Tariffs are revised once a year according to the Wholesale Price Index (WPI). This means that inflation risks during operations are to be borne by users in principle.

- Legal/regulation/permission/task change risk

— The following definition of Change-in Law is the same as that commonly used in MCA between sectors for the general India PPP infrastructure projects as described above:

  - Enactment of any new Indian Law
  - Repeal, modification or re-enactment of any existing Indian Law
  - Commencement of any Indian Law which has not entered into effect until date of Bid
  - A change in the interpretation or application of any Indian Law by a judgement of a court of record
  - Any change in the rates of any of the Taxes that have a direct effect on the Project

— Actions to be taken in case of Change-in Law are also the same as those stated in the MCA for highway under the control of NHAI. The concession agreement states that if there is a possibility of a cost increase over 1 crore in the net realizable value per fiscal year or a decrease in after-tax profits due to Change in Law, private sector companies may inform NHAI of the possibility and negotiate a change to the concession agreement with NHAI in order to satisfy the original terms of the contract.

- Project expropriation/termination risk

— If the project is terminated as a result of default by NHAI, NHAI is to pay compensation to private sector companies equal to 150% of the adjusted equity and the total amount of debt.

— If the project is terminated as a result of default by private sector companies and the road has already been put into service, NHAI is to pay to the lenders 90% of debt not covered by insurance. If the project is terminated during construction, NHAI is not to preserve receivables for the lenders.

Table 4-4 Termination Provisions and Event of Default

Table A5: Termination Provisions and Event of Default

Event of Default	During Construction (after financial closure)	During Operations
Soma Isolux event of default	No payment	Payment equal to 90% of debt due as on date of termination less insurance claims, if any.
The NHAI event of default	The NHAI shall pay to the concessionaire, by way of termination payment, an amount equal to: ▪ debt due; and ▪ 150% of the adjusted equity.	

Source: Concession Agreement.

(Source: “Proposed Loan National Highway 1 Panipat–Jalandhar Toll Road Project”ADB)

- Sponsor risk

  — The concession agreement states that private sector companies need to obtain the prior approval of NHAI for any change in the aggregate holding and that at the time of selection sponsors are not allowed to make a change that causes the aggregate holding to below:

    ◦ decline by 51% or more during the construction period
    ◦ decline by 33% or more during a period of 3 years after the date when the road is put into service
    ◦ decline below 26% or any lower proportion permitted by the NHAI

  — The concession agreement states that the approval of NHAI is required when a private sector company or sponsor company acquires stock (proprietary equity) exceeding 15%, which leads to ownership transfer. This is for security reasons regarding road infrastructure.

- Land acquisition and expropriation risk

  — The concession agreement states that NHAI is to have full responsibility for acquisition and expropriation of lands for the project, transfer of people, and compensation for them.
  — This project is intended to increase the number of lanes in the existing highway to six, and has more limitations on lands to be acquired or expropriated than a green-field project.

- Environmental permission and authorization risk

  — The concession agreement states that NHAI needs to acquire at least 60% of the right of way by the time of financial closure. As a point of reference, NHAI had already acquired most of the right of way for the highway under the control of NHAI by the last phase, in which the four-lane road was constructed.
  — NHAI is to acquire all environmental permissions, approvals of organizations related to the Ministry of Railways concerning construction of bridges and other structures over railways, and other required permissions in principle.
  — Before concluding the contract, Soma Isolux secured the support of NHAI as well as Punjab and Haryana provincial governments for acquisition of various kinds of permissions.
  — ADB and NHAI already confirmed the status of acquisition of all required permissions before concluding the loan agreement.

- Offtake risk (ridership risk)

  — This project is for widening the existing four-lane road. It is considered that the differences between actual and estimated track record of traffic volume and WTP of users are comparatively smaller than those in completely new projects.
  — If there is any gap between the estimated traffic volume and the actual one, the project period is to be increased or decreased. Specifically, if the actual demand in 2018 is lower than the estimated demand, the project period is allowed to be increased by up to 20% (for three years). If the actual demand exceeds the estimated demand, the project period will be allowed to be decreased by up to 10% (one and a half years).
  — If any competing highway is constructed near the project site, the toll of the competing highway must be at least 25% higher than that of the road of this project. This does not apply to a case where such a situation occurs in a period from the tenth year to the end of the project. In such a case, the project period will be increased by the same length as the period from the time when the competing highway is put into service to the time when the project period is ended for this project highway. If the income of the project is lower than the estimated amount due to the competing highway, NHAI is to pay compensation for the loss to private sector companies.

(7) Main findings

— Importance of strong partnership with local Indian companies

Isolux's success in the India road PPP sector greatly depends on strong partnership with the local partner, Soma Enterprise, based on a clear division of roles. The three projects Isolux has contracted for highways under the control of NHAI are implemented by joint venture with Soma. The investigation team's interview with Isolux has clarified the division of roles between both companies in the projects; Isolux is mainly in charge of the upstream part of the project, such as the management and design of the entire project. On the other hand, Soma is in charge of practical execution management of EPC. With extensive experience of road concession projects in Spain and Central and South America, Isolux has comprehensive management knowhow regarding road projects, including financing. With a wealth of experience in EPC in India, Soma performs practical EPC execution management, taking into consideration the execution environments in India. In this way, Soma and Isolux successfully compensate each other's respective strengths and weaknesses.

In particular, the road sector is a leading sector with many actual achievements in India PPP infrastructure projects. In this sector, business composition and ordering processes are being increasingly systematized and standardized, and the investment environment for private companies is highly matured. On the other hand, this sector is a fiercely competition environment, with many powerful experienced local Indian companies, such as Reliance

Infrastructure and L&T. Newcomers need to differentiate their risk management and financing capabilities from existing companies. In these circumstances, Isolux commented, with regard to the participation of foreign companies, that it is very important to select a local Indian partner with abundant experience in the EPC field in India and which is capable of properly evaluating the capacity of foreign firms such as Isolux.[68]

— Little space for originality and ingenuity despite highly matured business

This project was originally to be entrusted to private sector companies to the level of detailed design, as the first DBFO project among NHAI highway PPP projects, though conventional PPP projects were BOT projects. This project is a rare case where qualified bidder companies are allowed to submit technical proposals in the RFP stage. In reality, however, designer discretion was considerably restricted. Isolux commented that there was little room to exert their originality and ingenuity.

As described above, the NHAI highway projects are the leading sector in the PPP infrastructure projects in India. However, technical specifications are highly standardized, restricting the private sector's room for reducing costs by exerting their originality and ingenuity in design. Isolux and other foreign companies have expectations for projects composed on the basis of private proposals, as in the Swiss Challenge Method, but only few projects have been actually commercialized through such a route.

[68] Source: The investigation team's interview with Isolux

Chapter 5 The Expected Role of JICA and Proposals for Targeted Sectors and Fields

5.1 Discussion of areas where participation of Japanese companies and JICA support can be expected

Based on the preceding, this section lays out a discussion of the areas where the participation of Japanese companies and support from JICA in line with this can be expected by (i) sector and (ii) major state.

5.1.1. Sectors where Japanese company participation / JICA support can be expected

Exhibit 1 is a summary from the two points of view of (a) the degree of maturity of the PPP investment environment for the relevant sector, and (b) the marketability of Japanese companies, and a general summing up of those results. Note that the following items are each taken into consideration as elements forming the standard when discussing the degree of maturity of the PPP investment environment and the potential for participation by Japanese companies here.

- (a) Degree of maturity of the PPP investment environment
  - Presence of standardized documents at the federal level such as Standard PPA/MCA, RFQ/RFP
  - Number of times projects have been implemented or track record of overseas companies' participation as seen from the PPP India Database, etc.
  - State of preparation of support schemes by public organs and support track record
  - Degree of project uncertainty or risk as extracted from standardized documents and cases or from hearings
- (b) Marketability of Japanese companies
  - Number of times projects have been implemented or track record of overseas companies' participation as seen from the PPP India Database, etc. and presence of laws and regulations governing foreign direct investment
  - Japanese company technical abilities and superiority as players
  - Indian needs in terms of Japanese companies and target sectors as mainly extracted from hearings

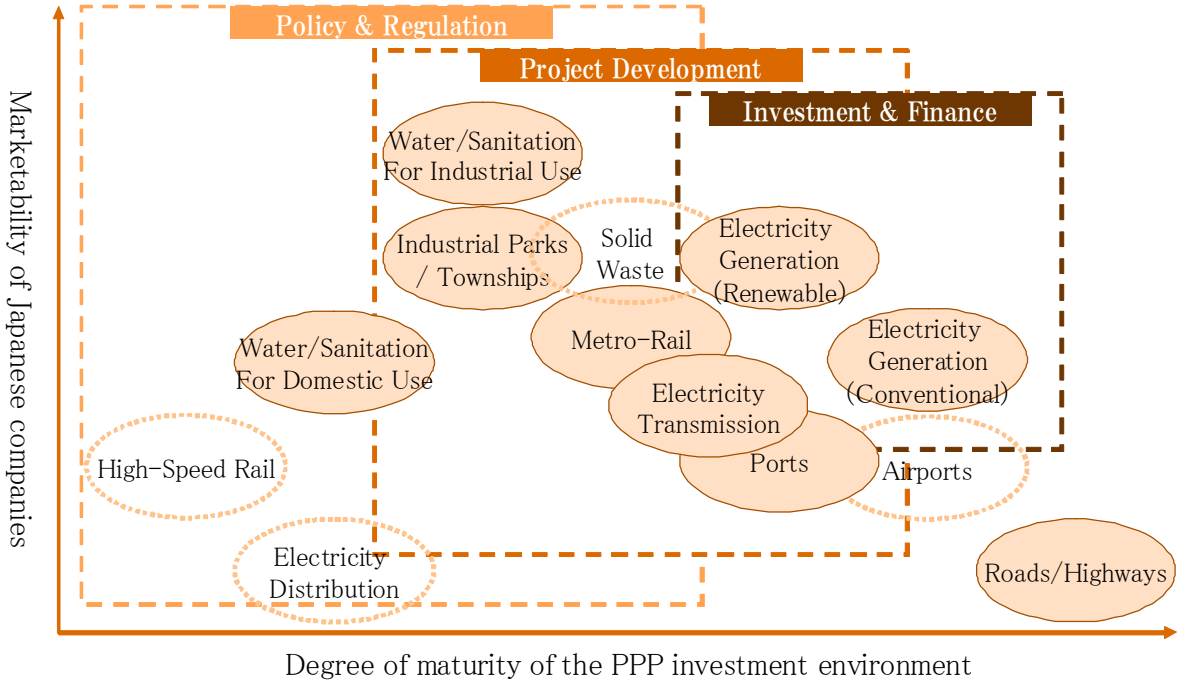

Figure 5-1 Sectors where Japanese company participation / JICA support can be expected

(Source: prepared by Study Team)

There are three main types, depending on what sort of support for India is expected of JICA. For the sectors where the PPP investment environment is not developed, it is assumed that first, (i) JICA will provide support for developing PPP systems and laws. For sectors where the investment environment is developed to a certain extent, (ii) it is required to support for forming specifically "bankable" projects such as project formation support. Research instrument for PPP infrastructure can be utilized. Furthermore, in sectors where the investment environment is developed, it is assumed that the central and regional Indian governments have the ability to form PPP projects, and suitable public-private business and risk sharing can be developed, so in addition, it is considered that (iii) support for long-term financing is expected. Financing could be supported by Private Sector Investment and Finance (PSIF) and Yen-loans for related infrastructure.

It is considered that a phased JICA support menu, depending on the sector status and existing risk, is needed, but this support needs to be multi-faceted and it will not always be sufficient to only implement each menu. It is easily considered that cases where financing is possible by providing project formation support and constructing appropriate project scheme. For example, the combination of JICA's support for the research on PPP and a financing tool, PSIF, could bring effective support on PPP. Moreover, enhancing the improvement of regulatory framework under (i) will enlarge opportunities to implement (ii) and (iii), such as PPP feasibility study and PSIF.

- • PPP investment environment development in these sectors is well progressed, and there is a high chance of participation by Japanese companies, so such participation and support from JICA can be expected in the near future.

  - Power generation (renewable energy)

    ◦ Chances for participation: Renewable energy has a room for making use of Japanese technology, and regulations on Feed in Tariff are developed for price setting, which will enable premium payment on renewable energy generation in order to subsidize generation costs higher than sales price depending on the source of renewable energy. In addition, SERC requires transmission companies purchase energy depending on identified price rate and quota on the ratio of green energy to total purchasing power. (Please refer to Chapter 1.1.7 for the details.)

  - Power generation (coal, gas)

    ◦ Chances for participation: Concerns about the national-level shortage of electricity and poor quality raw fuel (domestic coal) as well as the low generation performance from power plants and the medium to long term negative effects on the environment suggest a certain level of potential for the introduction of supercritical pressure thermal power plants which have technological superiority in Japan. However, the superiority in the technical side is being made up day by day by Indian companies as well as companies in China and Korea, so there is not a great deal of time to lose.

    ◦ Issues: Tariff-based competitive bidding which does not necessarily use raw fuel / power efficiency rates etc. as direct bid assessment standards is dominant, and with the current bidding system it is difficult to win a bid without improving price competitiveness.

    ◦ Issues: Case-II method or lower power generation businesses, with relatively little risk on the civilian side, are frequently large-scale businesses such as UMPP, and for Japanese companies, with a poor record of success in India, there is the danger that in-house determination for serious amounts of initial investment will cause problems.

- • Sectors where participation by Japanese companies can be expected, but achieving projects through PPP carries high levels of uncertainty and support for project formation by JICA is desirable.

- Bulk water supply (including industrial water, seawater desalinization projects) / Industrial waste water

    - Chances for participation: The water business has the potential for systems where there is no risk borne for recovering charges from the final consumer by using a bulk water supply business, and seawater desalinization projects can benefit from the superiority of Japanese technology.
    - Issues: There are the existence of competing businesses and effects on final charges collection from the financial clout of off-takers, but normally, private companies cannot control this. In addition, there are no PPP standardized documents.

- Subways

    - Chances for participation: There are track records for participation by foreign-affiliated companies such as Veolia Transport, CAF, and SNC Lavalin, with small investments.
    - Chances for participation: Japanese companies have a track record of supplying operation management systems and carriages for yen credit supply projects such as the Delhi and Bangalore metros. The Delhi Metro in particular is known both domestically and internationally as a success case for underground railways in India, and in line with this there is a good deal of trust and expectation regarding the technology held by Japanese companies.[69] In addition, it is said that while the PPP Model is not applied to the Bangalore Metro for the O&M part of the overall business, it is applied to the carriages O&M part, and this field, with no risks related to buying or obtaining land and real estate, is even more realistic for initial moves by Japanese companies.[70]
    - Issues: It is common for project revenues to greatly depend on the real estate development, and there are high risks for revenue. In addition, the cooperation of local partners is needed to real estate development and the potential for Japanese companies to hold the reins of the overall business are not necessarily high.

- Industrial estates / urban development

    - Chances for participation: There are also previous projects in the DMIC region by consortiums of Japanese companies, and there are high expectations

[69] Source: Interviews with multiple central government organs in India.
[70] Source: Interviews with Japanese companies.

for large-scale developments from Japanese companies with their financial muscle.

- Issues: The excessive passing of responsibility for the surrounding infrastructure and connectivity to private companies makes the feasibility uncertain. In addition, there are no systems to grant comprehensive infrastructure development rights for the multiple sectors required for urban development.

- • Sectors where there are numerous issues in the investment environment at the current moment and support by JICA for developing PPP policies and laws for government organs is desirable.

  - Household water / sewage

    - Chances for participation: The high levels of Japanese water operation technology are considered to be effective for the water sector in India where supply is poor, and, while limited, there are previous cases of foreign investment.
    - Issues: The levels of water and sewage charges are low, and it is difficult to recover costs from business revenue, so some form of government support for commercialization is needed. However, there are few PPP standard contracts and procedures. In addition, the awareness of the citizens regarding the necessity of paying water charges needs to be improved. There is an ongoing need to improve the water connection rates, and it is assumed that investment in piping, which is not expected to be profitable, is needed.

5.1.2. Regions where participation by Japanese companies / JICA support can be expected

In the same way, Exhibit 2 is a summary from the two points of view of (a) the degree of maturity of the PPP investment environment for the following 14 states or areas, and (b) the participation potential of Japanese companies and a general summing up of those results. The regions selected for this survey are the five survey states of Gujarat, Maharashtra, Karnataka, Tamil Nadu, and Haryana, the three states included in the DMIC concept target area (Rajasthan, Uttar Pradesh, and Madhya Pradesh), the three states where advanced approaches for PPP infrastructure were detected in the survey (Andhra Pradesh, Punjab, and West Bengal), and the three regions where expectations for future PPP growth were detected (National Capital Territory of Delhi, Orissa, Bihar). Note that the following items are each taken into consideration as elements forming the standard when discussing the degree of maturity of the PPP investment environment and the potential for participation by Japanese companies here.

- (a) Degree of maturity of the PPP investment environment

- Number of times infrastructure projects have been implemented at the state government or local body level or track record of overseas companies' participation as seen from the PPP India Database, etc.
- Presence of systematic frameworks unique to each state related to PPP infrastructure
- Presence of nodal agencies related to PPP infrastructure
- Whether hearings have detected advanced approaches

- (b) Participation potential of Japanese companies

  - Being the target area for the Indo-Japanese cooperative project DMIC/South India core site concept (also, being the site for smart city projects involved in by the Japanese side from the conceptual stage)
  - There are many Japanese companies already there
  - Whether hearings have detected any expectations for future growth

Exhibit 2 Majors states where Japanese company participation / JICA support can be expected

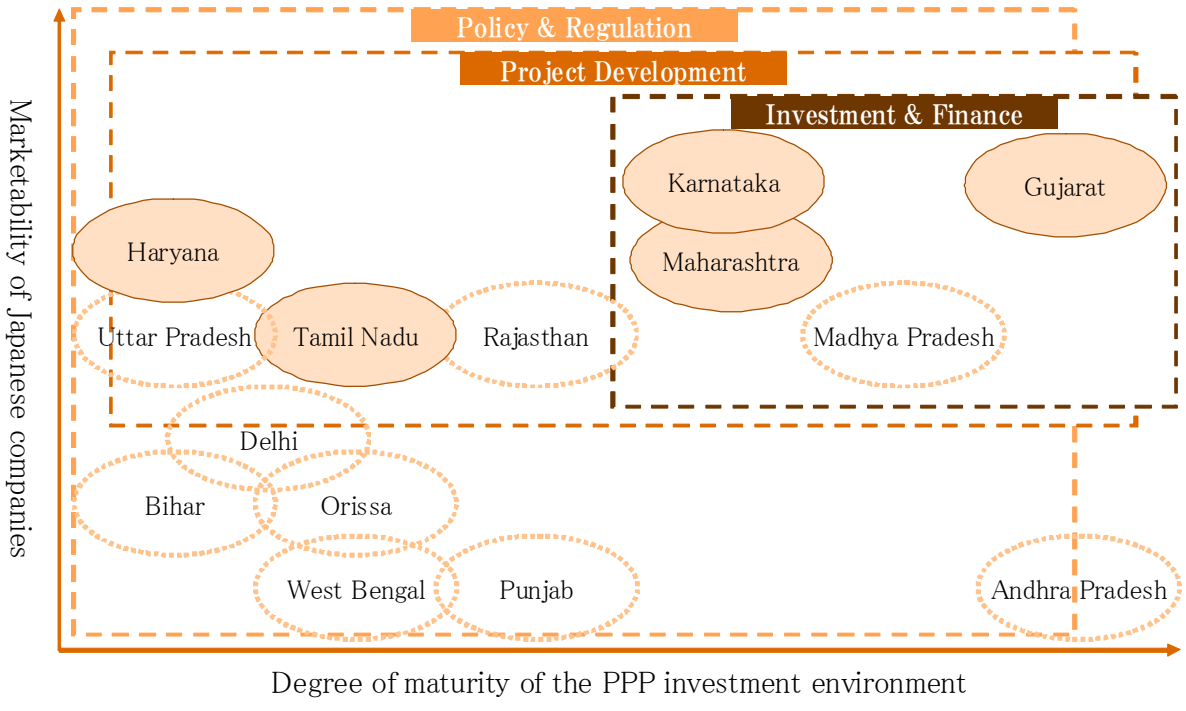

Figure 5-2 Majors states where Japanese company participation / JICA support can be expected

(Source: prepared by Study Team)

As seen in the discussion of sectors, there are three main types, depending on what sort of support is expected of JICA. For states where the PPP investment environment is not

developed, it is assumed that first, (i) providing support for developing PPP systems and laws. For states where the investment environment is developed to a certain extent, (ii) it is required to support for forming specifically “bankable” projects such as project formation support. Furthermore, in states where the investment environment is developed, it is assumed the regional Indian governments have the ability to form PPP projects, and suitable public-private business and risk burden is set, so in addition, it is considered that (iii) support for long-term financing is expected.

As for sectors, it is considered that a stepped JICA support menu, depending on the sector status and existing risk, is needed, but these support needs are changeable and it will not always be sufficient to only implement each menu. It is easily considered that cases where financing is possible by providing project formation support and constructing appropriate project scheme.

5.2 Overview of the expected role of JICA

As outlined in Chapter 1, India is one of the countries that have been the most successful at promoting PPP, and is attempting to respond to investment needs for the nation’s strong infrastructure. Infrastructure PPP has been developed along with sector reforms rather than as itself, but in recent years it is being promoted for social infrastructure such as health and education, and not just revenue-generating economic infrastructure such as toll roads and airports. This trend has a high potential for creating new creative methods for infrastructure finance, drawing on private capital. However, a detailed look at the infrastructure PPP market reveals that this track record is not necessarily distributed among a large number of sectors, and the roads sector has the lion’s share (55% of projects, 47% of monetary amounts), and in addition, participation by foreign companies is limited. Participation by Japanese companies in particular has only a few examples of success in Indian PPP businesses, and future JICA support is expected to be a catalyst for the participation of Japanese companies in Indian infrastructure PPP.

The sorts of risks and bottlenecks exist for foreign direct investment by Japanese and other foreign companies in the PPP infrastructure market was shown in Chapter 4. Fields where JICA support is considered effective for reducing or eliminating current bottlenecks are (1) long-term financing in the local currency, (2) provision of risk mitigation measures, (3) forming appropriate business structures, (4) promoting communication between private companies and central or regional Indian governments and ordering agencies, and (5) capacity building for central or regional Indian governments.

Next, after considering these support policies and roles expected of JICA in 5.2, 5.3 will consider initiatives by Japanese companies and 5.4 will discuss areas where, based on these, participation by Japanese companies and support from JICA can be expected.

5.2.1. Support through financing

As noted in Chapter 1, investment in Indian infrastructure PPP showed high growth in the latter half of the 2000s, and the investment value in 2010 was about nine times that of 2005.[71] In addition, checking the sources of that capitalization shows that commercial banks accounted for 72%.[72] Checking the worldwide league tables for project finance shows that four Indian banks, including the State Bank of India, are in the top ten. On the other hand, there is not necessarily a notable amount of capitalization by foreign financial agencies, and company capitalization is very likely to be restricted to capital sources, periods, interest rates, etc. that domestic financial agencies can provide. For that reason, it is considered that capitalization from JICA to complement these will be effective.

On the other hand, for existing ODA support, it is noted that there is a major issue in that many Indian government agencies and Japanese companies sometimes take a long time for processing, and do not meet the Indian PPP infrastructure project timeline. Rather than support for each individual business matter, developing a system or scheme that can allow a comprehensive response at the project implementation agency or government level and a policy for securing timely support is the issue.

(1) Direct funding for projects

By implementing investment and lending by drawing on overseas investment, it can provide long-term funding for PPP projects. At present, while it is difficult to procure funding for 10 to 15 or more years in India, PPP project contracts are from 25 to 30 years. In hearings with both the public and private sectors in this survey, numerous comments were provided to the effect that funding over more than 15 years was both effective in terms of business stability, and was expected. (As noted later, if it becomes possible to avoid currency exchange risks by funding in the local currency, it is assumed even greater effectiveness.) In particular, there are a number of voices in Indian government agencies and private companies, as well as Japanese companies, expressing their expectation for the use of highly concessional funds for things like subways and industrial estate / urban development that are seen to have poor business revenue in the initial stages of operation compared to the initial investments.

On the other hand, there are points that have been noted regarding the use of JICA funds by private companies. If it is judged that the conditions presented by JICA before the bidding is concessionary, then there is the risk that consortiums of local Indian or other foreign companies would see the funding as distorting the competition.[73]

In addition, it can be considered to finance for public project procurement through yen loans. If the loans are provided by the project implementers (central or regional government agencies, ordering agencies), then consideration will be needed if it is subleased. For

[71] PPIAF database
[72] Source:
[73] Source: Interviews with international development agencies

subleasing, funds are provided to the Ministry of Finance from JICA and the Ministry then funds central or regional government agencies in the form of loans, investments, aid, or so on.

- Example: It is considered that support could be given as yen loans for fields with relatively poor profitability such as basic infrastructure for industrial estate development, links with land transport for port development, water supply / water resource development for water projects, power supply projects, and so on.
- In addition, for the yen loans, requests for funding in local currencies and funding for sub-sovereign areas such as water, waste, and power projects with the regional governments as implementing body, are being made by local and private businesses.
- (Note that there was an opinion from a government agency that if the review and granting process for yen loans can be made more rational, then it would be possible to make use of them promptly. There were also comments that JICA demanded more time than other assistance agencies.)
- (In addition, there were opinions from the Indian government agencies that they had the impression what, while the procedure until funding for yen loans was complex, there was in fact almost no interference such as monitoring once the funding was granted. In the water field in particular, the knowledge held by JICA and other Japanese government agencies and private companies is useful and involvement in projects at the project implementer level such as the provision of yen loans being directly connected with the capacity building of ULBs is desired.)

(2) Indirect funding

Rather than investment for long-term financial institutions such as IIFCL (or long-term financing that draws on program loans or two-step loans), it is assumed that providing resources for long-term financing that are lacking locally is also effective. In India it is hard to procure funds in the local currency for greater than 15 years, with the exception of IIFCL, and funding resources for PPP projects which normally have periods of 25 to 35 years are limited. Hearings during this survey also provided numerous requests for JICA support for long-term funding from the various agencies. In addition, naturally enough, it is required to check that the target financial institution has appropriate governance and funding meets JICA's goals.

When there is a need to limit the purpose of funding to specific sectors or specific projects, it can be considered that funds from JICA would be made use of.

In addition, comments were provided from multiple Indian government agencies expecting free or charged funding cooperation for programs for central or state government infrastructure-related measure programs.

5.2.2. Support for Measures to Reduce Risks

(1) Political Risk Guarantee/Credit Risk Guarantee

- Risks borne by JICA for design of the financial coverage system within the state government and the overseas investment and loan program in light of the characteristics of the Indian PPP infrastructure project in which the application of the guarantee of off-takers' liabilities by the upper government organizations such as the central government, etc. is practically difficult in cases where the state government/ULBs become off-takers.
- Establishment of a grand fund or an equity fund which covers the first loss of the project due to political risks in light of the characteristics of JICA as an organization offering grants as well as the conditions of the Japanese macro economy which is based on the extremely low interest rates.
- Supplementary guarantee of political risks by NEXI

(2) Mitigation of Foreign Exchange Risks

- Proposal of measures to mitigate foreign exchange risks by swaps, lending tools, provision of funds denominated in the local currency, etc.
- In addition, it is assumed effective to provide support on a content level such as providing support to establish regulations to guarantee pricing which will reflect an increase in costs due to the foreign exchange influence more accurately.
- Moreover, it is also possible to provide financial support to secure a certain level of liquidity in the case of foreign exchange risks to be borne by public agencies.

(3) Mitigation of Interest Rate Risks

- Achieve the matching of payments based on the fixed-priced system with the provision of a fixed-rate loan–

5.2.3. Support for the Formulation of Projects

(1) Establishment of a Fund or Provision of Capital for Project Formulation

- Expected benefits of the PPP projects are not brought until the segregation of tasks and risks between the public and private sectors is appropriately structured, the project is formulated as a "Bankable" program, and valid bidding is completed. While this kind of project formulation requires not only the determination of the public sector's side with regard to the execution of the project but also business development based on specialized analysis, capabilities of local agencies which execute businesses vary depending on the sector and state. It is noted that JICA's PPP feasibility study fund can be effective to support private sector's project development. However, it is important to support local government, as a procuring agency, structure and develop a project. As in the case of the India Infrastructure Project Development Fund (IIPDF) by the Indian government, it is considered to be extremely beneficial for JICA to establish a fund (Project Development Facility) to formulate projects or to provide capital to such funds. Under such circumstances, it is possible to avoid redundancies with existing schemes by extracting promising

sectors and states outside the DMIC area where these kinds of funds have already been established. It is noted that due diligence through PDF during a project development stage nad development of tender documents should be clearly differentiated.

- In addition, it is possible to effectively utilize the capital contributed from such funds by setting a revolving fund by collecting the amount from successful bidders and utilizing it for the formulation of new projects, etc.
- It also seems possible to establish funds which take into consideration the needs of counterparts by discussing whether such funds should be managed by the central government or by the regional government, and whether the funds should focus on a specific sector or technology, etc.
- It is assumed that the sector which the provision of capital for the formation of projects is required in particular is the field of power generation that utilizes renewable energy. This is attributable to the fact that this field is generally regarded as a purely private project (for which there is no practical commitment by the public sector with regard to the expropriation of land, obtainment of approval and licenses, etc. excluding the case of electricity purchased based on the Feed-in Tariff, subsidy for small hydroelectric generation and biomass power generation, preferential tax treatments and relatively concessional loans by IREDA) rather than a PPP project and that feasibility study (F/S) expenses are borne by the private sector.

(2) Provision of Technologies to Funds for the Formulation of Projects

- Whether the formulation of projects will be successful or not depends largely on the capabilities of the executing bodies such as the central government and regional government. As the PPP Cell specialized in the support of the PPP projects already exists within the central government and regional government in India, it is effective to provide support by sending PPP specialists to such organizations to support PPP projects by the local government agencies. As the provision of technologies for the formulation of projects, support for the selection of prospective projects, creation of project schemes including appropriate segregation of risks, etc., procurement support, formulation of a pilot project, etc. can be considered. The ADB has already dispatched specialists to 23 PPP cells with proactive support measures. It is assumed that it is important to coordinate with other aid organizations such as the ADB, etc. and to provide local support on a practical level.

5.2.4. Promotion of Communication Between the Central and Regional Governments in India and Private Japanese Companies

(1) Promotion of Inter-governmental Discussions with the Central and Regional Governments in India

- It is assumed effective to promote mutual understanding as a place to share concerns of Japanese private companies regarding the PPP investment environment (issues

related to the legal system, issues concerning the segregation of risks, etc.) while setting up inter-governmental discussions with the central and regional governments in India and collecting the latest local information (development plans, design of the PPP program, etc.)

- Moreover, it is also considered effective to reinforce mutual relationships with an inter-governmental framework agreement such as the DMIC and to promote the formulation of projects which will contribute to the development of India. It is assumed that JICA will be able to provide physical, technical and financial support with regard to such framework agreements as an aid organization in addition to providing support for inter-governmental discussions. Examples for this include investment to development corporations such as the DMICDC, dispatch of personnel, provision of capital for PDF as mentioned earlier, F/S support for applicable projects in Japan etc.
- However, in order to avoid a conflict of interest, it is necessary to bear in mind that there is a need to establish a system which can specify objectively that there is no mutual involvement between the provision of procurement advisory for tender document preparation, and due diligence through PDF etc. during the project formulation stage and/or the execution of investments and loans.[74]

(2) Information Sharing with those in the Private Sector with an Interest in Investing in India

- In order to promote private investment and establish an appropriate PPP scheme, it is also considered to be important to exchange information regularly with those in the private sector with an interest in investing in India and to gather the latest information on the regions covered by the scheme, areas of interest, receptivity to risks, etc.
- For example, there were those with the opinion that Japanese construction companies could not even participate in bidding since the STEP project of the DFC Western Corridor which had been formulated by the Japanese government and JICA contained unprecedented order conditions covering a distance extending up to 300 km and a work period of around two years, which was a scale Japanese construction companies had never experienced before. While there is a view that this is an issue with risk management capabilities, etc. of Japanese companies, other people also pointed out that there are projects other than DFC which are named “infrastructure projects through the combined efforts of the public and the private sectors” and for which the Japanese “public sector” is supposed to be deeply involved in the project formulation, but the “private sector” may not be able to benefit from such projects due to a gap between the order conditions and capacity of Japanese companies.[75]

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[74] Source: An interview with multilateral development banks
[75] Source: An interview with a Japanese construction company

– According to the valuation method currently used for PPP bidding in India, after the screening of qualifications, most valuations are conducted based on prices only. In cases where prices area used as significant valuation criteria, superior technologies owned by Japanese companies cannot be valued appropriately and they are exposed to competition with cheap products from India and other countries. Therefore, when making proposals to the Indian government agencies and local companies, etc., it is important for Japanese companies to analyse both quantitatively and qualitatively that their technologies have a sufficient level of price competitiveness from a perspective of life cycle cost, and that they have an adequate level of technology as there are many areas in which Japanese technologies have offered safe and secure services for a long period of time. It can also be considered that JICA will provide support for verification analysis with regard to comparative superiority of Japanese companies and technologies to meet local needs.

(3) Provision of the Latest Information with regard to PPP Frameworks and Procedures in the Central and Regional Government and Participants in the PPP Market

– There are many opinions from private companies saying that the bidding procedures and the obtainment of approval and licenses in India are not easy as it takes time and effort to gather information due to the fact that the system and point of contact vary from state to state. It can be considered that JICA will gather information on PPP investment, procurement procedures, prospective projects, PPP-related law, point of contact for investment, etc. and provide such information to private companies.
– In order to gather information for these kinds of purposes and dispatch specialists to PPP Cells, etc. the central and regional governments may contribute to smooth information gathering.
– In addition, it is important to play a supplementary role by gathering information in collaboration with other donors such as the ADB, etc. who provide proactive PPP support on a local level.
– Furthermore, in most cases, private companies from other countries enter the PPP market by building a partnership with local companies. When building a partnership with local companies, it is assumed that Japanese companies will find it useful to know what kind of local companies are already in the PPP market and what kind of companies are looking into entering the market in the future. It can be considered that JICA will gather such information and provide support. Moreover, it seems beneficial to provide information not only on partner companies but also on legal and technical advisors with knowledge of the complicated legal system and the reality of infrastructures in India.

5.2.5. Capacity development by central and local governments

(1) Support for capacity development by central and local governments

– From now on, capacity development by Indian central and local governments is greatly anticipated in the following areas through the further promotion of infrastructure PPP.

  ◦ Improvement of procurement system (schedule, selection standards etc.), improvement of project management capacity to minimise project delays, demonstration of clear commitment from the government.
  ◦ Improvement of government funding programs
  ◦ Establishment of appropriate rate system
  ◦ Improvement of legal framework
  ◦ Rationalization of PPP/environment related government approval procedures

– Speeding up supply of information on PPP projects and creation of lists of projects

5.3 Anticipated initiatives by Japanese corporations

5.3.1. Selection of suitable local partners

– Regarding entry by Japanese corporations, it is believed that it is necessary to select a local partner who is familiar with local commercial practices and regulations and is eager to enter the subject market. In particular, it is possible that whether or not there is an Indian corporation in the consortium can significantly influence the effects of expression of risk on the project in the case of risks which are generally borne by the public sector and for which the success is influenced by the scale of such commitment, such as the risk associated with land acquisition and acquisition of various permits etc.[76]. Furthermore, if it is considered the substantial investments of overseas Indians, tie ups with Indian corporations in third countries could also be a possibility.

– However, it is also necessary to consider that in the case of actually concluding partnerships, the time taken by Japanese corporations to make decisions is a significant issue. Certainly, Indian PPP infrastructure business entails significant ambiguous risk, and furthermore entry by foreign corporations in effect needs to be on projects over a certain scale and investment scale and therefore there is a general tendency for Japanese corporations to take time to study the situation. However, particularly among Indian corporations, there are many corporations which consider the enormous volume of information required by Japanese corporations for study purposes and the stance of Japanese corporations towards taking time to make internal decisions a problem; and there are cases where the Indian corporations end up shying away from Japanese corporations even though the technological skills of

[76] Source: Comments from a number of Indian government institutions, Indian corporations, and foreign firms.

Japanese corporations are seen as superior to European or US corporations.[77] Therefore, it is believed that there is an urgent need to establish internal structures which give the authority to simply and quickly make decisions on investments of a certain scale after grasping the main points in connection with the establishment of a project/corporation partnership.[78]

5.3.2. Provision of price competitive services

– Regarding the restrictions of the procurement system which emphasize price, as mentioned before, concerns were voiced by some Indian government institutions that making selections with an emphasis on price may lead to a fall in quality. On the other hand, for Japanese corporations also, it is believed that there is room to study the building of a framework for providing new services which can satisfy the technical and service levels required locally and be price competitive.

5.3.3. Taking reasonable risks

– As it is noted at case studies on foreign companies participation in PPP infrastructure in Chapter 4, companies have a long term perspective to consider their participation in Indian market. They recognize the circumstance that frequent delays of a project, foreign exchange risks due to the Rupee denominated project revenue, risks associated with off-takers. In addition, most companies formulate a consortium with local companies and develop a framework to manage risks including financial institutions and advisors.

— For example, it is noted from one of a major infrastructure operator that the potential of Indian economy and infrastructure sector drives them to enter into the market although it recognizes risks associated with PPP projects in India.

— It is important to consider risks and returns, project feasibility, appropriate methodology and environment of investment. It would be important to develop a various methodology to manage risks and improve internal decision making process in order to enhance foreign direct investment for infrastructure PPP. It will be expected that financing agencies, such as JICA, will provide tools to support some risks which cannot be managed by the private sector, develop institutional framework and support its activities,

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[77] Source: An interview with an Indian corporation which stated that they had studied a tie up with a Japanese corporation in the past but ended up forming a tie up with a Western corporation.

[78] While there is criticism that Japanese corporations are too cautious, there was also the opinion that the corporate culture which favors long term partnerships is one which is more compatible with the Indian corporate culture than compared with the Western corporations, and some Indian corporations expressed the opinion that if only the speed of decision making could be improved then they would like to actively seek tie ups.

References：Abbreviation List

略語	意味
PPP	Public Private Partnership
VGF	Viability Gap Funding
IIFCL	India Infrastructure Finance Company Limited
IIPDF	India Infrastructure Project Development Fund
IDF	Infrastructure Debt Fund
NHAI	National Highway Authority of India
ULBs	Urban Local Bodies
PPPAC	Public Private Partnership Approval Committee
SEZ	Special Economic Zone
VfM	Value for Money
MCA	Model Concession Agreement
MoP	Ministry of Power
PPA	Power Purchase Agreement
RFQ	Request for Qualification
RFP	Request for Proposal
FDI	Foreign Direct Investment
WPI	Wholesale Price Index
MoEF	Ministry of Environment and Forest
CoI	Committee on Infrastructure
DEA	Department of Economic Affairs
IDFC	Infrastructure Development Finance Company
IL&FS	Infrastructure Leasing & Financial Services Limited
SPV	Special Purpose Vehicle
F/S	Feasibility Study
RBI	Reserve Bank of India
SBI	State Bank of India
PFC	Power Finance Corporation
UMPP	Ultra Mega Power Plant
SFC	State Financial Corporation
SIDC	State Industrial Development Corporation
MSRDC	Maharashtra State Road Development Corporation
MMRDA	Mumbai Metropolitan Region Development Authority
CEA	Central Electricty Authority
CERC	Central Electricity Regulatory Commission

略語	意味
SERC	State Electricity Regulatory Commission
MoUD	Ministry of Urban Development
JnNURM	Jawaharlal Nehru National Urban Renewal Mission
ECB	External Commercial Borrowing
GMB	Gujarat Maritime Board
TNMB	TAMIL NADU MARITIME BOARD
NBFC	Non-banking financial company
PNB	Punjab NationalBank
REC	Rural Electrification Corporation
IRFC	Indian Rail Finance Corporation Ltd.
FIPB	Foreign Investment Promotion Board
DMIC	Delhi-Mumbai Industrial Corridor
GIDA	Gujarat Infrastructure Development Act
GIDB	Gujarat Infrastructure Development Board
SIR Act	Gujarat Special Investment Region Act
GIDC	Gujarat Industrial Development Corporation
ADB	Asian Development Bank
PPIAF	Public-Private Infrastructure Advisory Facility
JNPT	Jawaharlal Nehru Port Trust
IDD	Infrastructure Development Department
MUIDCL	Maharashtra Urban Infrastrucure Development Company Limited
MUIF	Maharashtra Urban Infrastructure Fund
MUIFTCL	Maharashtra Urban Infrastructure Fund Trustee Co
MIDC	Maharashtra Industrial Development Corporation
SLSWA	State Level Single Window Agency
DPR	Detailed Project Report
iDeCK	Infrastructure Development Corporation Karnataka Limited
KUIDFC	Karnataka Urban Infrastructure Development and Finance Corporation
KSIIDC	Karnataka State Industrial & Infrastructure Development Corporation Limited
KIADB	Karnataka Industrial Areas Development Board
KIPDF	Karnataka Infrastructure Project Development Fund
KWSPF	Karnataka Water & Sanitation Pooled Fund
PAA	Project Approvals Authority
SIPB	State Investment Primotion Board
TNUIFSL	Tamil Nadu Urban Infrastructure Financial Services Limited
TIDCO	Tamil Nadu Industrial Development Corporation

略語	意味
SIPCOT	State Industries Promotion Corporation of Tamil Nadu
TNUDF	Tamil Nadu Urban Development Fund
TNUITCL	Tamil Nadu Urban Infrastructure Trustee Company Limited
TNUIFSL	Tamil Nadu Urban Infrastructure Financial Services Ltd
WSPF	Water and Sanitation Pooled Fund
HSIIDC	Haryana State Industrial & Infrastructure Development Corporation
HUDA	Haryana Urban Development Authority
DMICDC	Delhi Mumbai Industrial Corridor Development Corporation Limited
L/C	Letter of Credits
CMWWSB	Chennai Metro Water Supply and Sewerage Board
CWDL	Chennai Water Desalination Limited
BWPA	Bulk Water Purchase Agreemen
WTP	Willingness to Pay

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