ASIAN DEVELOPMENT BANK

TA 7055-IND: Capacity Development of National Capital Region Planning Board (NCRPB) – Package 1 (Components A and C)

Financing Plan for NCRPB

April 2009

Submitted By:

Infrastructure Professionals Enterprise Private Limited, India

in association with

Tamil Nadu Urban Infrastructure Financial Services Limited, India

ACRONYMS

ADB	:	Asian Development Bank
DFID	:	Department for International Development
DMRC	:	Delhi Metro Rail Corporation
DPR	:	Detailed Project Report
ERP	:	Enterprise Resource Planning
FEICOM	:	Fonds Spécial d'Equipement et d'Intervention Intercommunale
GIS	:	Geographical Information System
GOD	:	Government of Delhi
GOI	:	Government of India
HDFC	:	Housing Development Finance Corporation
HUDCO	:	Housing and Urban Development Corporation
IAs	:	Implementing Agencies
IDFC	:	Infrastructure Development Finance Company
IL&FS	:	Infrastructure Leasing and Financial Services Ltd
IUIML	:	IL&FS Urban Infrastructure Managers Limited
JBIC	:	Japan Bank for International Cooperation
KfW	:	Kreditanstalt für Wiederaufbau
LGIDF	:	Local Government Infrastructure Development Fund
LGUGC	:	Local Government Unit Guarantee Corporation
MDF	:	Municipal Development Fund
MIA	:	Municipal Infrastructure Agency
MIS	:	Management Information System
MOU	:	Memorandum of Understanding
MW	:	Mega Watt
NABARD	:	National Bank for Agriculture and Rural Development
NBCC	:	National Buildings Construction Corporation Ltd
NCR	:	National Capital Region
NCRPB	:	National Capital Region Planning Board
NGO	:	Non-Government Organisation
PDF	:	Project Development Facility
PFC	:	Power Finance Corporation Ltd.
PPP	:	Public Private Partnership
PPP	:	Public Private Partnership
SPV	:	Special Purpose Vehicle
SRF	:	State Revolving Funds
SWM	:	Solid Waste Management
TA	:	Technical Assistance
WB	:	World Bank

Contents

I. BACKGROUND

1. The National Capital Region Planning Board (NCRPB) was created as a special purpose body for promoting balanced development of the National Capital Region (NCR) through an Act of Parliament (NCRPB Act, 1985) which was duly confirmed by the legislatures of Haryana, Rajasthan and Uttar Pradesh. The vision of the National Capital Region is to develop the National Capital and its surrounding areas as a region of global excellence with Delhi-centric emphasis to disperse/reduce pressure on the Capital's infrastructure.

2. In order to achieve this vision, the Board has been attempting to channelise the flow and direction of economic growth along more balanced and spatially oriented paths, through formulation of Regional Plans and performance of other functions related to the implementation of the Regional Plans. In order to support planned infrastructure development in the region, the Board has established the NCRPB Fund to provide concessionary finance to infrastructure projects in the region.

3. The demand for infrastructure including energy in NCR as highlighted in the Regional Plan 2021 estimate these investment requirements to be in the region of Rs. 3,00,000 crore for NCR alone. NCRPB is expected to support Rs. 15,000 crore of projects under the Eleventh Five Year Plan ending in 2012. It is quite likely that the quantum of projects that would need to be supported by NCRPB going forward in the next five year plan would be of a much higher magnitude.

4. The NCRPB Fund has been built up over the years with non-lapsable grants from the Government of India (GOI) and Government of Delhi (GOD) as well as internal accruals from interest income earned on concessionary loans. In addition, the Board has resorted to market borrowings through private placement of bonds. These bonds have been rated AAA by CRISIL (subsidiary of Standard & Poor's) and AAA (SO) by FITCH Ratings. Subsequently, NCRPB has also received LAAA rating from ICRA for its proposed bond issue.

5. NCRPB Fund has cumulative funds of around Rs 1800 crore as of March 2008, of which yearly internal accruals are Rs 100 crore approximately. However, in order to support projects aggregating to Rs 15,000 crore for the 11th Five-year Plan (2007-2012) NCRPB needs to leverage its existing credit position and explore other sources of financing.

6. In this context, NCRPB has already approached Asian Development Bank (ADB) for $200 million line of credit (~ Rs 1000 crore). It is expected that the loan may get effective in FY 2010 and the first tranche of $ 30 million will be available to NCRPB for on-lending. ADB has already provided $ 2 million technical assistance for enhancing capacity of NCRPB and its implementing agencies for integrated regional planning. In addition, skill-sets for project preparation, financing and implementation of projects will be enhanced for ensuring planned development of the region.

7. This report on 'Financing Plan for NCRPB' has been developed in the context of the changing landscape for infrastructure planning, development and financing in the NCR region. This report draws from the Diagnostic Study submitted as part of the Inception Report to Asian Development Bank under this TA. This Financing Plan is part of the overall Business Plan under preparation for NCRPB and addresses issues related to resource raising. It does not address implementation issues particularly those relating to organizational structure and human resources. All aspects will be covered in detail in the Business Plan due for submission with the draft final report.

II. DEMAND ASSESSMENT FOR NCRPB ASSISTANCE

8. It is widely recognized by policy makers that creation of world-class infrastructure is a prerequisite for sustaining economic growth in the country. The Government of India has estimated in its 11th Five Year Plan that Rs. 20,000 billion at 2006-07 prices (equivalent to US $400 billion at Rs. 50 per USD) is required to bridge the infrastructure gap. The central and state governments are projected to finance 37.16% and 32.76% of these investment requirements respectively in the 11th Five Year Plan. The infrastructure gap is therefore significant and calls for innovative mechanisms for leveraging existing resources available with Government agencies.

9. The infrastructure gap in NCR has been estimated at Rs 3,00,000 crore in the Regional Plan upto 2021. These investments are phased as shown in illustration 1. The following sections discuss investment requirements and NCRPB intervention strategies across various sectors.

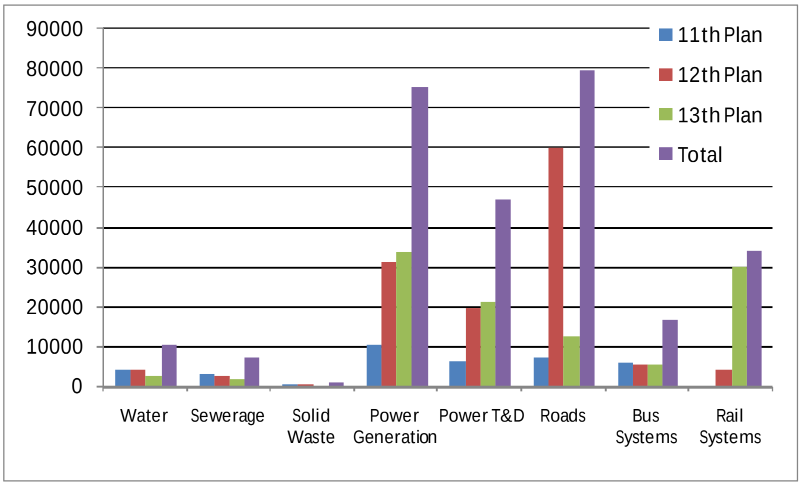


Illustration 1: *Demand for infrastructure in NCR across five year plans.*
Source: NCRPB Regional Plan 2021

2.1 Need for Integrated Management of Solid Waste

10. There is a huge gap in the quantity and quality of basic services provided to citizens in the NCR. For example, solid waste management is the responsibility of local bodies in the region. The nature of services to be provided in this sector commence from primary collection of waste to treatment and scientific disposal of the waste. In practice, few local bodies in the country are providing the entire spectrum of services particularly management of sanitary landfills. Post Supreme Court judgment regarding Municipal Solid Waste Rules 2000, there is regulatory pressure on all urban local bodies to create scientifically managed sanitary landfill facilities. Many ULBs are unable to address the issue of land procurement and associated initial investments which are beyond their financial capacity. Gujarat, Tamil-Nadu, Kerala, Karnataka and few other states are experimenting with shared regional landfill facilities and PPP models to leverage private resources. This is one of the areas where NCRPB can facilitate setting of regional sanitary landfills through appropriate arrangements.

2.2 Tackling Managerial Inefficiencies in Solid Waste

11. The NCRPB Regional Plan 2021 envisages total investment requirement of Rs. 1362 crore for collection, transportation and disposal of solid waste. The investment requirements are not huge and ULBs do receive some funding support through the central and state finance commissions as well as Government of India schemes such as JNNURM and UIDSSMT. The main problem in the case of solid waste management is managerial and operational inefficiencies within the local bodies. NCRPB can facilitate appropriate utilization of private sector skill-sets in solid waste management projects by creating appropriate institutional structures such as SPVs for managing regional treatment and disposal facilities with appropriate forms of private sector participation in collection, transportation, treatment and disposal of waste.

2.3 Treatment Technology Critical for Sewerage Infrastructure

12. In the case of sewerage, the coverage varies widely. In Central NCR the coverage is about 80% whereas in some areas of UP and Rajasthan there is no sewerage facility. The estimated investment requirement for sewerage in this region according to the NCRPB Regional Plan is around Rs. 8321 crore till 2021. NCRPB can help the local bodies in developing the treatment facilities by involving technology providers. This approach would support access to the latest technologies and result in sustainable operations and maintenance for the commissioned sewerage treatment plants.

2.4 Huge Requirements in Water Sector

13. Investment requirements till 2021 in water sector are estimated at Rs 13,184 crore. In the case of water supply, Delhi has water supply of 225 LPCD as against the CPHEEO norm of 135 LPCD, whereas in other parts of NCR the supply ranges between 25 LPCD to 145 LPCD. Supply of water in Rajasthan is very poor. It is to be noted that there is huge loss of water in this region. The unaccounted for water (UFW) in this region ranges between 30% and 50%. In order to increase operational efficiencies, NCRPB can support management contracts for achieving reduction in UFW and improvement in operations and maintenance through long-term O&M contracts. Significant grant assistance up to 80% of project cost is available for water projects through UIDSSMT and JnNURM. NCRPB can facilitate award of projects on a BOT basis whereby the operator constructs the facility, arranges financing for 20% of capital cost and meets operations and maintenance cost for the defined concession period. Payments to the operator can be in the form of annuities with appropriate incentives and penalties linked to performance. NCRPB can look at providing both project development assistance and financial assistance in the form of credit enhancements(take-out financing) to backstop annuities, whereby NRPB agrees to pay the annuities in case the state government/implementing agency is unable to honour financial commitments towards annuity payments under the concession agreement.

2.5 Probability of Demonstrating Success Higher in Transport Projects

14. In the case of transport sector, Delhi acts as a hub for the northern part of the country. Hence in the Regional Plan 2021 it is proposed to take various measures such as construction of expressways, ring roads, rapid transit systems, widening of district and highway roads and improvement of rail networks. In the regional plan, NCRPB has proposed the implementation of transport projects in two phases and has estimated investment requirements in the first phase at Rs. 21,830 crore. This excludes the investment requirements for rail networks and national highways. Similarly in Phase II, projects like Ghaziabad – Meerut expressway, and grid-roads are identified. It will be easier for NCRPB to demonstrate success in transport sector since India's ability to roll-out projects has been relatively impressive in transportation sector. A functional plan for transport sector has been prepared by NCRPB and critical projects are in the process of being identified.

2.6 Investment Requirements across the Power Value-Chain

15. In the case of power, the Regional Plan 2021 estimated that generation capacity would have to be augmented by about 50,000 MW with concomitant investments in transmission and distribution networks. The total investment requirements estimated in the Regional Plan for power generation is Rs. 93,380 crore and for transmission and distribution is Rs. 58,000 crore. Even after factoring in the proposed investments by central sector utilities like National Thermal Power Corporation and Power Grid Corporation as well as those by state utilities, there is likely to be a significant shortfall in both generation and transmission capacities.

2.7 Opportunity in Power Sector

16. In the power sector, NCRPB can facilitate private sector participation by playing a role similar to that of PFC for Ultra Mega Power Projects. In consultation with the Ministry of Power as well as the respective state governments and power utilities, NCRPB can identify a few projects, both Brownfield and Greenfield, for further development. NCRPB can explore co-financing of projects in the state sector with existing financiers such as REC and PFC. In addition, NCRPB can explore the possibility of facilitating entry of other government/quasi public sector players in the area of power generation for NCR such as IFFCO, KRIBHCO, NBCC, IOC, New Delhi Municipal Council, DDA and MCD (Waste to Energy projects). NCRPB can facilitate project development through the MoU route with these players and provide funding support for project preparation, assistance in land acquisition and limited co-financing for debt during financial closure.

17. **Joint Project Development for Power Projects:** NCRPB can also assume project development risks for smaller power projects including combined captive power projects, whereby NCRPB facilitates DPR preparation, seek clearances, fuel linkages and finances land acquisition in a project SPV (owned by respective state government). The fully developed project can then be competitively bid to the private sector, which can assume financing, construction and operations & maintenance risks. NCRPB can explore joint development of combined captive power projects with PTC India Limited, which has raised funds abroad for investments in the power sector, including assets such as purchase of coal blocks internationally. PTC India Limited can also facilitate in execution of Power Purchase Agreements for these projects.

2.8 Fostering Economic Growth

18. Apart from infrastructure sectors identified above, NCRPB has the mandate to foster economic growth in the National Capital Region through development of industrial, social and economic infrastructure. This entails facilitating investments in creation of infrastructure in industrial parks/townships, social infrastructure such as health, education, heritage and tourism, housing & shelter, environmental infrastructure. In addition, NCRPB is entrusted with the mandate to ensure rural development in the region through interventions in areas of micro-entrepreneurship, allied agro-economic activities, vocational skill up-gradation and provision of urban amenities in rural areas.

19. The overarching regional planning role performed by NCRPB provides it with an opportunity to intervene across a wide spectrum of economic activity and infrastructure in the region. The demand for investment assistance is huge as is evident from the snapshot presented above. However, there is a significant gap between the investment requirements identified in the regional plans and the actual implementation through projects financed and supported by NCRPB.

20. The following section looks at the international experience with similar financial intermediation at the national/sub national level to support infrastructure investments. Based on this analysis, the product and fund evaluation strategy for NCRPB is delineated in the subsequent section.

III. INTERNATIONAL EXPERIENCE

3.1 Municipal Development Funds

21. In various countries, the governments have experimented with catalysing investment flows through Municipal Development Funds (MDFs). The institutional structure of MDFs has evinced a mixed result where funds were on-lent at stricter terms as in the case of Thai MDF. It has worked in the case of Tamil Nadu Urban Development Fund (TNUDF) in India, where TNUDF has been able to perform its intermediation role effectively. The MDFs in Brazil showed impressive loan repayment performance initially, but failed to attract direct private lenders due to a high degree of perceived commercial and political risks. The successful Columbian and the Czech MDFs have led to development of a multi-tier municipal finance systems in these countries.

22. With support of the European Agency for Reconstruction, the Government of Serbia established the Municipal Infrastructure Agency (MIA), to assist municipalities with preparation of bankable projects and establish a credit market for municipal infrastructure finance. Other municipal development funds include the Fonds Spécial d'Equipement et d'Intervention Intercommunale (FEICOM) in Cameroon, which functions as the key mechanism for generating and allocating revenues among local authorities and assists councils in implementing major projects such as roads, water and electricity with a primary focus on utilities and urban development. The Local Government Infrastructure Development Fund (LGIDF) in the Philippines focused exclusively on activity implementation, but did not address the issue of generating sustainable capital market debt. Similarly, Local Government Unit Guarantee Corporation (LGUGC) in Indonesia is primarily involved in providing insurance to municipal investors; it also determines the creditworthiness of projects besides injecting liquidity in the municipal bond market via cheaper alternatives.

Municipal Finance Company of the Czech Republic (MUFIS)

MUFIS was designed to accelerate commercial bank lending to municipalities wherein it borrows long term funds from the external market which it on- lends at fixed rate terms for a period of 8 to 10 years to commercial banks for municipal lending. The commercial banks undertake individual loan appraisals and collateralize their loans either with municipally owned property or access to municipal deposit accounts. The municipalities develop projects, the commercial banks conduct credit and risk analysis and the MUFIS primarily provides long term funds and thus its limited functions enables it to act rapidly. Overall a two tier market has emerged wherein larger cities raise funds primarily from bond issues and the intermediate sized and small cities meet their financing needs from commercial banks with or without MUFIS support. Also there is a zero interest lending in this market for environmentally sensitive municipal projects from the state environmental fund. *(Source: Using Municipal Development Funds to Build Municipal Credit Markets, George E. Peterson, World Bank,1996)*

23. Territorial Financing Institution of Columbia, FINDETER is a market-oriented MDF that operates as a rediscount facility for commercial bank lending to the municipal sector besides supplementing the banks' project appraisal capacity to improve the technical quality of their lending. It also has a poverty alleviation mandate and gives special attention to institutionally weak and small towns and investments in essential services primarily in water and sanitation. It primarily acts as refinancing facility for municipal loans wherein it assists municipalities on technical specifications, costs and budget analysis and financial feasibility of projects along with identification of a commercial bank willing to finance the project after conducting its own credit and risk analysis.

24. FINDETER's approval to projects are seen by such banks as a security that the project is financially and technically feasible and construction would be completed in given

timelines. FINDETER also refinances up to 85% of loan through its refinancing facility and its regional offices actively oversee construction progress and monitor tariff implementation. The loans under this program have shown a good repayment history as in addition to individual credit appraisals, there are intercept agreements wherein the bank can access the intergovernmental tax sharing payments. However, delays during loan reviews and approvals has led to a three tier credit market wherein the largest cities raise finances primarily from bond issues, intermediate sized cities raise funds from commercial banks without FINDETER participation and the small cities and towns heavily utilizing FINDETER assistance.[1]

Municipal Development Fund of Georgia, established in 1997, is a sound self sustainable financial institution operating as a revolving fund with the primary objective of strengthening institutional and financial capacity of local governments, improving the primary economic and social services for the local communities, developing renewable energy sources, restoring irrigation and drainage systems, and mobilizing finances from international donor agencies, financial institutions etc to enable the local governments undertake investments in the municipal infrastructure. It is also involved in the management optimization and introduction of international best practices in local self governments which lack access to management expertise and the capital markets. Over the years, the fund has invested in roads, water supply and sanitation, rehabilitation of public facilities, urban transport infrastructure, sanitation and SWM, electricity etc. *(Source: Municipal Development Fund of Georgia, Victor Metreveli)*

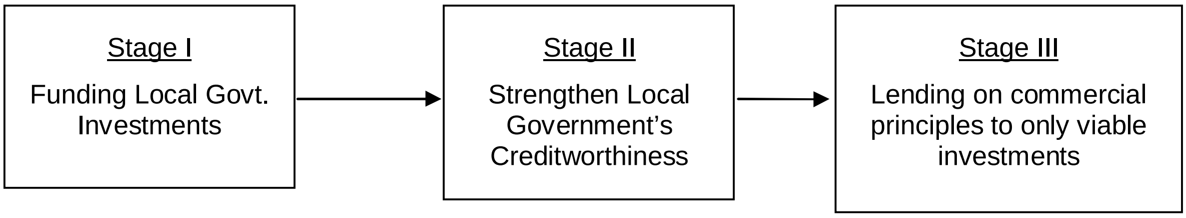
25. **State Revolving Funds (SRF) in USA**:- The key revolving fund programmes include the Clean Water State Revolving Funds (CWSRF) pioneered in 1988 and providing more than $5 billion annually to fund projects in the core areas of water quality protection for wastewater treatment, non point source pollution control, and watershed and estuary management. This joint federal/state funded SRF programme is designed with the objective to meet the goals of the Federal Clean Water Act .The program receives funds primarily from US EPA federal capitalization grants, state bond measures, sale of revenue bonds and repayment of outstanding financial arrangements. It is estimated that while the market rates have averaged 4.6%, the CWSRF rates have averaged 2.2% leading to a 20% savings in project costs. The SRF bond sector is the only sector in the U.S. municipal market to achieve a AAA median rating from a major bond rating agency The SRF finances projects for a maximum of twenty years but can offer financing for a longer term i.e. Extended Term Financing (ETF) in certain cases.

26. On similar lines, the Drinking Water State Revolving fund (DWSRF) was established via the Safe Drinking Water Act (SDWA), 1996 to finance infrastructure improvements in drinking water systems providing funds to small and disadvantaged communities as well as to programs for pollution prevention to ensure safe drinking water. The Act (SDWA) requires that EPA allots grants to each state based on the state's proportional share of the total needs reported in the most recent 'Drinking Water Infrastructure Needs Survey' with the minimum proportional share being one percent of funds available for allotment to all of the states. The Act also provides funding for Indian Tribes and Alaskan Native Villages, monitoring of unregulated contaminants, and operator certification reimbursements. Loans made under the program usually carry an interest rate varying between 0% and the market rate with a repayment period of upto 20 years.[2]

[1] *See George E. Peterson " Using Municipal Development Funds to Build Municipal Credit Markets", World Bank,1996*

[2]See *United State's Environmental Protection Agency (US EPA), www.epa.gov*

27. There is a general consensus that one way to increase private funding to the local governments is through specialized commercially viable and well capitalized financial intermediaries that are capable of mobilizing long term debt from the capital markets independently for providing adequate finances to the local governments. Such financial intermediaries could evolve through different stages wherein in the first stage they would act as an instrument to channelise budgetary resource transfers in a systematic manner; then move on to the second stage where they would help strengthen the local government's creditworthiness by improved budgeting, auditing and accounting standards for transparent information to the stakeholders and finally enter the third stage, where they would operate along commercial principles and provide lending to only viable and revenue generating investments.



Source: El Daher, S., Specialized Financial Intermediaries for Local Governments: A Market-Based Tool for Local Infrastructure, Washington, DC: World Bank,2000

3.2 Implications for NCRPB Fund

The NCRPB Fund has not been a mechanism to transfer budgetary resources to local bodies but has functioned like a revolving fund (capitalised through government grants and bond issues) for providing soft loans to infrastructure projects which are in accordance with the Regional Plan 2021.

28. NCRPB has not followed commercial appraisal practices while sanctioning projects but has relied more on support from state governments to ensure debt servicing on its exposures. In accordance with its overarching mandate and the changing macroeconomic environment, NCRPB needs to develop its product strategy and its resource raising plans so as to innovatively support much larger investments in the infrastructure domain in the NCR region.

IV. PRODUCT STRATEGY

4.1 Existing Financial Assistance Framework

4.1.1 The Mission

29. The over-arching mission for NCRPB is to promote economic growth in the NCR through balanced regional development.

4.1.2 Operationalising the Mandate

30. Traditionally, NCRPB has operated it mandate through two channels – the Regional Plan and the NCRPB Fund. The regional planning process facilitates the formulation of policy relating to land use, urban settlement patterns, provision of suitable economic base for future growth, and infrastructure development for transport, communications, power and water supply and sewerage for the entire NCRPB region. The NCRPB Fund has been used to provide loans to infrastructure projects within the region.

4.1.3 Eligible Borrowers

31. The Board of NCRPB is empowered to sanction loans to State Governments, to State Governments having a counter magnet area and the local authorities, urban development authorities, housing boards and such other authorities of the State Government responsible for implementing the sub-regional plans and project plans or for developing the counter magnet area.

4.1.4 Existing Products

32. The existing product stable of NCRPB comprises of plain vanilla loans to projects. The project cost is typically financed as 25% contribution from state agencies and balance 75% by NCRPB in the form of loans.

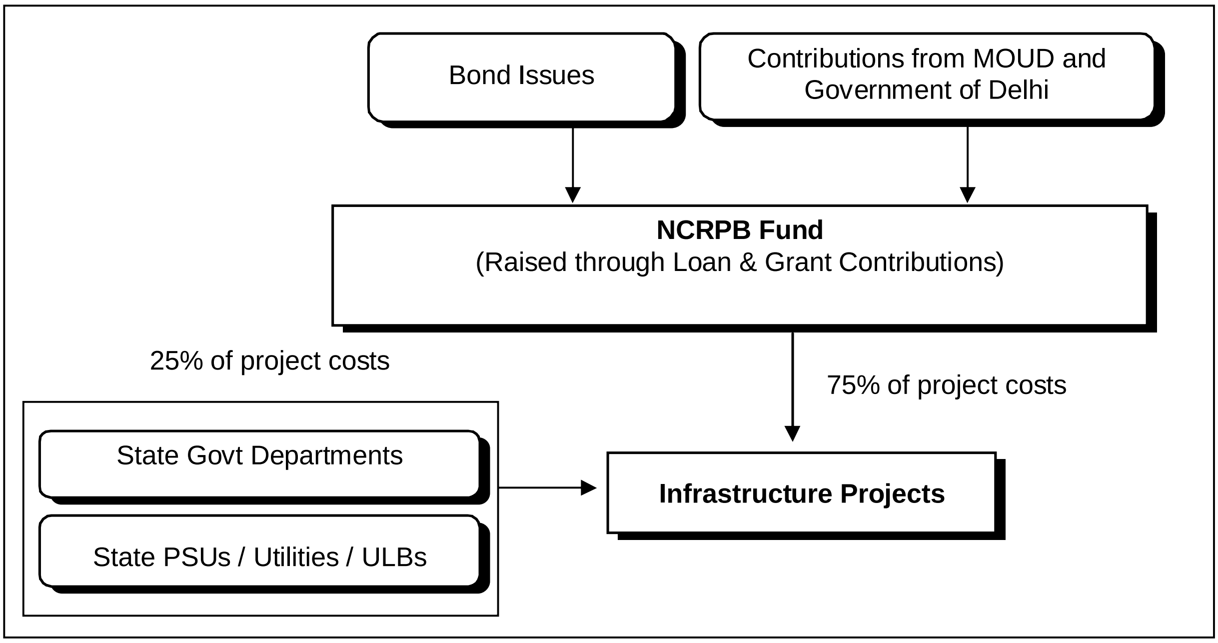


Illustration 2: *NCRPB Financing and Fund Deployment Plan (Phase-I)*

4.1.5 Principal Loan Terms

33. NCRPB provides loan assistance for 10 years, primarily to meet the liabilities arising out of bonds raised from capital markets of similar tenor. The loans by NCRPB are provided as concessionary loans with a tenor of ten years including a moratorium of two years. Further, interest payments and principal repayments on these loans are on an annual basis.

4.2 Issues Impacting Current Operations

4.2.1 Keeping NCRPB Mission Relevant

34. The means to achieve this mission go beyond formulating regional plans and providing loans through a limited fund. In the fast changing macroeconomic environment, NCRPB can promote economic growth by a series of interventions aimed at removing critical infrastructure bottlenecks and enhancing quality of life in the region by improving access to basic civic services to both urban and rural areas. NCRPB needs to transform itself into an institution which not only has the vision for planned development of NCR but possesses the means to provide the entire spectrum of infrastructure development and financial services to translate the vision into reality.

4.2.2 Need for Long-tenor Funds

35. There is a need to provide long tenor funds to implement infrastructure projects since such projects are long gestation where stable cash flows are seen 5-7 years after the project award. The financing currently available in the market is often short-term and has frequent interest rate resets. This results in interest rate risk and liquidity risk in case the project promoters are not able to refinance the loans at the same terms.. The maximum tenor available in the Indian market is 15 years with 2-3 year resets.

4.2.3 Mismatch b/w Resource Mobilisation and Deployment

36. NCRPB has witnessed periods where it has not been able to deploy its available resources optimally and periods where resources are a constraint. This has arisen primarily because of the inability of its implementing agencies to plan projects and ensure drawdown of funds in a timely manner.

4.2.4 Need for Project Development

37. The key deterrent to flow of investments is the absence of well structured and bankable projects. Typically, Government agencies do not have the requisite technical and financial resources to prepare detailed project reports. Further, government agencies neither have the capacity nor the resources – financial and managerial, to support project development for capital intensive infrastructure projects. NCRPB can use a portion of the grants provided through Government of India and Government of Delhi for undertaking project development.

Project Development Facility at TNUDF

In Tamil Nadu, a Project Development Facility (PDF) was created as a grant fund facility managed by Tamil-Nadu Urban Development Fund (TNUDF) to finance project preparation. The fund size is about Rs. 13.50 crore supported under World Bank line of credit, which is mainly used for preparation of detailed project reports for complex yet innovative projects, conducting feasibility studies and structuring of PPP projects, hiring transaction advisors for PPP projects, etc. Out of the total sanctions for project development, 33% were already under implementation and others are either under preparation or where studies were under way which would lead to project identification.

4.2.5 Need for Leveraging through Innovative Strategies

38. With the available grants and internal accruals of NCRPB, it would be difficult to leverage the NCRPB Fund of ~ Rs. 1800 crore as on March 31, 2008 to make a significant impact on developments in the region. If an assumption of supporting projects to an extent of 75% is made, NCRPB would be able to support Rs 2400 crore of projects with current resources. On the other hand, if NCRPB Fund is assumed as its Net-Worth, with a gearing of 2, NCRPB can raise Rs 3600 crore and support project costs of Rs 7200 crore. There is

clearly a need to leverage the available fund of NCRPB through innovative mechanisms rather than pure-play balance sheet exposures.

4.2.6 Need for Flexibility in Product Offerings

39. NCRPB supports a wide gamut of projects such as land development projects, commercially attractive power generation projects and traditional urban infrastructure projects which have not yet witnessed significant flow of investments. In order to continue to support projects across these segments, it is important to follow differentiated project structuring and lending strategies. For instance, for projects with shorter payback periods, products of shorter tenor should be offered vis-à-vis the typical loan product of NCRPB. New products offerings should therefore be made by NCRPB to ensure that flexibility is available in tailoring repayments to the cash-flows of the projects.

4.2.7 Existing Players

40. As NCRPB provides assistance to a wide range of developments in the region, it complements traditional budgetary sources such as Central and State Governments plans. In addition, public sector agencies such as HUDCO, PFC, REC are other sources for financial assistance for the projects financed by NCRPB in different sectors. The comparative advantage however rests with NCRPB due to its ability of offer cheaper loans (through cross subsidization by grant funds). However, NCRPB remains a marginal player in the market due to its relatively smaller resource base vis-à-vis these institutions.

4.3 Proposed Product Strategy

41. Based on issues outlined above, it is imperative that NCRPB enhances its existing product portfolio to offer the comprehensive range of products to projects developed in the region.

42. NCRPB should experiment beyond the traditional model where projects are conceived and implemented by Governments and its agencies. As part of this strategy, NCRPB should explore development of projects in Public Private Partnership (PPP) frameworks wherein NCRPB would provide the initial seed capital for project development/preparation. As these projects move further in the project cycle and access finances from the market, NCRPB should recover these investments from the successful developers by factoring the project development costs into overall project costs, which may then be returned to NCRPB at a small premium. NCRPB can also explore providing assistance to State Governments for meeting their share of investments to these projects.

4.3.1 Proposed Product Stable

43. NCRPB should expand its product offerings to include:

a. **Fund based products** such as debt, quasi equity such as subordinated debt, whereby NCRPB is. In addition to financing products, assistance in the nature of soft grants or seed capital can be provided for identified projects.

b. **Non-fund based products** such as credit enhancements in form of guarantees.

4.3.1a Fund Based Products

44. **Loan Product:** The loan facility would remain as the mainstay for NCRPB. However, loans should be provided with varying tenors and interest rates linked to underlying project cash-flows. For instance, commercially viable power projects may be financed with relatively shorter loan tenors as compared to sewerage or water supply projects which may require loan tenors of 20-25 years. Long tenor funds may be concessionary in nature depending upon the requirement of such projects.

45. **Variants of Loan Product:** In addition to the loan product for varying maturities and interest rates, its variants such as subordinated debt can be provided to projects. Such

products can be deployed for allocating higher levels of risk in projects implemented in PPP mode. Typically, NCRPB can provide a subordinated loan to projects in the construction phase, whereby NCRPB agrees to subordinate its rights to those of other lenders, and agrees to get repaid after senior lenders dues are settled. As a subordinate lender, NCRPB would get higher interest rates to compensate it for assuming higher level of risks. These loans can subsequently be refinanced by bank loans as the project enters operational phase and cash flows stabilizes. This would enable the financial markets to price risks appropriately depending upon the stage of project implementation and may facilitate takeout financing by other lenders with wider liability profile. This product should typically be put in practice gradually as NCRPB gains in experience with deployment of loan product with varying tenors and interest rates. For deployment of this product, NCRPB needs to engage in extensive consultations with the lender community and enhance their confidence in the credit quality of projects prepared/supported by NCRPB.

46. **Technical Assistance in the form of Soft Loan/Grants:** Technical assistance as a product should be made available by NCRPB. This should be deployed for (i) preparation of sub-regional/functional and city development plans, (ii) preparation of detailed project reports compliant with NCRPB appraisal criteria and those of multilateral lenders such as ADB, (iii) undertaking project monitoring and supervision of projects (iv) any other as may be deemed appropriate by NCRPB .

47. **Equity/Quasi Equity Products:** Currently, NCRPB may not be in a position to take equity exposures in projects. To begin with, NCRPB as part of ongoing initiative to prepare transportation functional plan for NCR may identify institutional, implementation and financing mechanisms for critical projects. Some of these initiatives may be domiciled in Special Purpose Vehicles (SPV) in which NCRPB can provide the initial capital for project preparation. This seed capital can then divested in favour of selected private sector developer or Government agency which is identified for implementation.

4.3.1b Non-Fund Based Product

48. **Credit Enhancement Product:** NCRPB should provide full and partial guarantees to debt issuances, pooled finance structures(under the Pooled Finance Development Fund scheme of Government of India) as well as project SPVs floated by the borrowers. This would therefore enable more project sponsors and projects to access the capital markets for funding. Credit enhancement can be provided either on the strength of NCRPB’s own credit rating of AAA or NCRPB can act as an intermediary through whom the credit enhancement products can be distributed to projects in the region. For instance, Asian Development Bank (ADB) offers partial credit guarantees as a credit enhancement product. NCRPB can explore avenues for availing these enhancements for project developed/supported by NCRPB wherein the credit risk vests with ADB. On the other hand NCRPB can itself provide guarantee as a credit enhancement product for projects supported by borrowers. Such guarantees would be within prudential limits set by the rating agencies without any dilution in its present credit rating.

4.4 Evolving Product Strategy

The product strategy suggested above is indicative and would need to be evolved as NCRPB assumes a prominent facilitating role for supporting projects in the region. New products including hybrid structures (viz. combination of various products) could then be explored based on NCRPB’s experience of diversifying its traditional product portfolio.

49. In line with the product strategy suggested above, there exists a need for preparing an accompanying resource mobilisation strategy. The following section captures the proposed evolution of NCRPB Fund in terms of diversification of resources as well as broadening the product portfolio to meet the needs of infrastructure financing in NCR region.

V. EVOLUTION OF NCRPB FUND

5.1 Need for a Roadmap

50. The huge demand for investments in NCR for critical infrastructure as well as product strategy delineated in the previous chapter would require a well defined roadmap for evolving the NCRPB Fund from a simple revolving fund providing vanilla loans to an intermediary which has the ability to provide the entire gamut of financial product for infrastructure in the region. It is important to review the Indian experience of financial intermediation through similar structures prior to recommending a roadmap for NCRPB.

5.2 Indian Experience with similar Financial Intermediation

51. In India, there are a host of specialized financial institutions providing a range of products to the infrastructure sector such as IL&FS & IDFC which are structured as private sector intermediaries; IIFCL – backed by Government of India and sectoral public sector financial entities such as HUDCO (urban), REC (rural electrification), PFC (power), NABARD (agriculture and rural development). These are corporate entities established in accordance with the provisions of The Companies Act, 1956 unlike NCRPB which has been established under an Act of Parliament. Some of the intermediaries mentioned above have set-up dedicated debt funds under different implementation models. The successful example of such intervention in the infrastructure sector has been in urban sub-sector with Tamil-Nadu Urban Development Fund (TNUDF).

5.2.1 Tamil Nadu Urban Development Fund

52. TNUDF, a successful example of Public Private Partnerships (PPP) in financing, has been a strategic initiative of the World Bank along with the Government of Tamil Nadu, IL&FS, ICICI and HDFC which collaborated to benchmark a concept for facilitating urban sector lending linked to reforms. This Fund has been operational for more than a decade and has assisted core sectors such as water and waste water treatment, solid waste management, roads as well as revenue generating enterprises, wholesale markets and bus stands. The TNUDF experiment has been successful due to availability of the technical assistance which has been an important driver for creating demand for loan assistance. The TNUDF has also been successful to some extent in linking the capital markets to the Urban Infrastructure Sector in the State of Tamil Nadu. The fund has however, had limited success in attracting private equity participation in urban projects. Projects that have been funded by the TNUDF have remained largely Urban Local Body/Government-owned.

5.2.2 Pooled Municipal Debt Obligation Facility

53. A recent initiative (2006) in the urban sector has been pooling of financial resources by 12 leading commercial banks and institutions in India led by IDBI, IL&FS, IIFCL and Canara Bank to provide term loans to projects in the urban sector. These loans are provided for a tenor of 13 years with a three year moratorium. This arrangement is a syndicated consortium credit lending in a Facility-Asset Management Company (AMC) format. The AMC for this Facility is a dedicated manager – IL&FS Urban Infrastructure Managers Limited (IUIML), a subsidiary of Private Equity firm (IL&FS Investment Managers Limited) which has ADB, IFC and Indian Financial Institutions as its investors. This Facility intended for municipal projects and projects developed by private sector are operational and has mobilized $ 700 million of credit lines for on-lending to projects.

5.3 Future Strategy for NCRPB

54. In order to transform itself, NCRPB needs to prepare a phased roadmap for the next decade. In order to diversify its funding sources and offer longer tenor loans NCRPB has already approached ADB through Department of Economic Affairs for USD 800 million loan,

of which the first tranche is likely to be around USD 300 million. The strategy as presented in the figure is detailed in the following paragraphs.

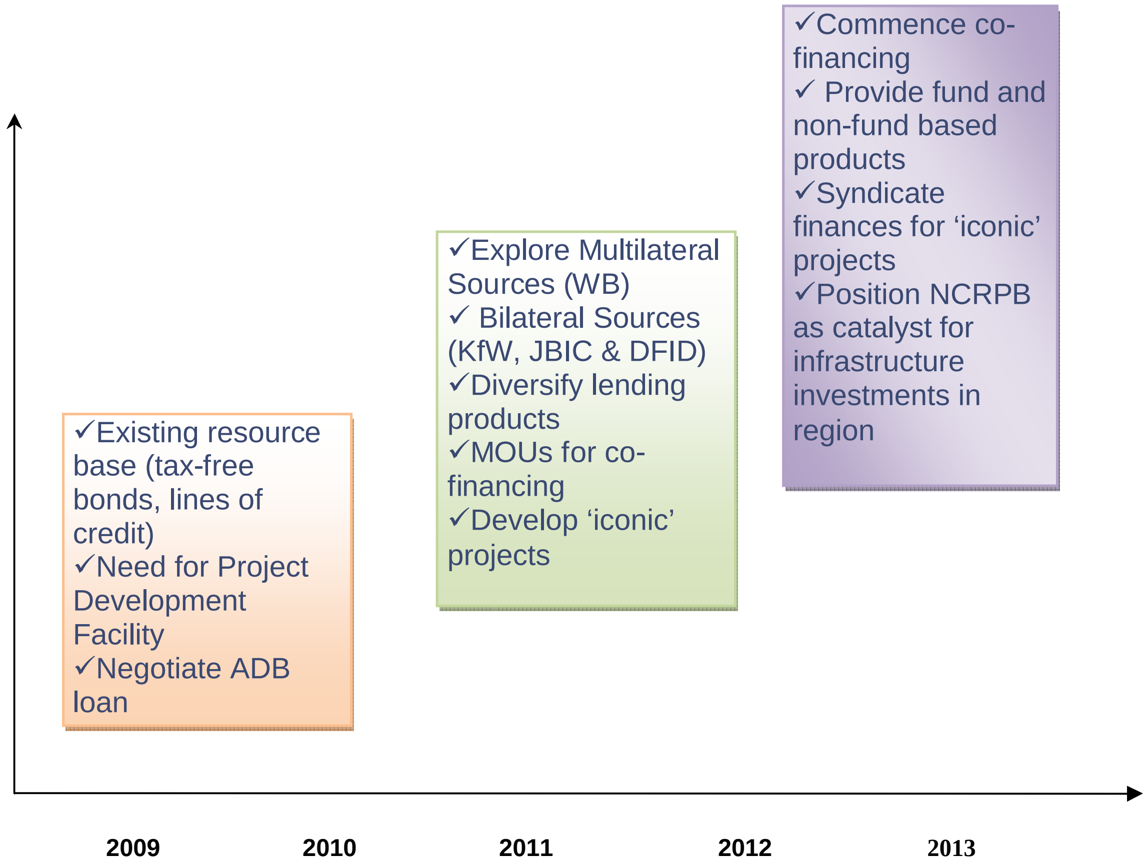


Illustration 3: *Overall Future Strategy for NCRPB*

5.4 Short term Strategy

55. Till 2010, the ongoing technical assistance from ADB would provide NCRPB with a shelf of projects aggregating to a cost of $ 130 million. Besides, measures for strengthening capacity of NCRPB staff and its implementing agencies on aspects relating to monitoring project preparation, project appraisal and structuring, improving operational efficiencies in its planning and financing departments through Business Process Re-engineering (BPR) and designing specifications for tools such as Enterprise Resource Planning (ERP) and Geographical Information Systems (GIS) will be undertaken in this period.

5.4.1 Operationalizing the Project Development/Technical Assistance Facility (PDF)

56. Over the short term, efforts will be expended in conceptualizing a revolving Project Development Facility (PDF) which will provide technical assistance support to projects identified through regional plans and city development plans. Typically, an infrastructure project entails 3-5% of project costs towards project preparation and development. The limits to such a facility would be small (Rs 50 crore) for which an initial contribution may be earmarked upfront by NCRPB. These limits can be enhanced by:

i. Provisions created from the NCRPB Fund partly financed through lapsed incentives offered to borrowers.

ii. Sourcing technical assistance grants from multilateral and bilateral agencies.

iii. Replenishment / reimbursement under prevailing Government of India or State Government schemes such as JnNURM, UIDSSMT and India Project Development Fund.

57. The assistance for project development can be factored as part of project costs, which would then get funded at the time of financial closure, which can then be recovered by NCRPB from the borrowers. This would ensure that the limits for providing technical assistance would be available for new projects identified subsequently.

58. Over time, this assistance would facilitate structuring of viable projects by incorporating Public Private Partnership (PPP) frameworks and addressing economic, environment and social concern in such a manner that the projects meet the needs of multilateral agencies as well as regulators.

5.4.2 Diversifying Resource Base

59. NCRPB should explore raising resources through tax-free bonds to reduce financing costs and lines of credit from commercial banks to tide over temporary mismatches. Other sources such as borrowings from development authorities (Delhi Development Authority) should be explored. This would facilitate in enhancing the resource base of NCRPB prior to availing the long-tenor lines of credit from multilateral and bilateral institutions.

5.5 Medium Term Strategy

60. From 2010 till 2012, NCRPB would take forward the following engagements from the short term:

5.5.1 Completing on-going initiatives

- Set up the project development facility and sanction assistance for development of a few yet 'iconic' projects in the region
- Implement the ERP and GIS systems designed in the earlier phase
- Sanction assistance to projects appraised under the framework developed under the ADB TA
- Complete loan negotiations with Asian Development Bank for proposed line of credit. Sanction assistance to a few projects under this credit

5.5.2 New initiatives

- Supplement NCRPB resources by sourcing long-tenor funds from other multilaterals such as World Bank.
- Resources from bilateral agencies such as KfW, JBIC and DFID to be tied up.
- Diversify the lending product offerings by providing a range of products identified under the business plan (short, medium and long term debt).
- Memorandum of Understanding (MOU) with other lenders such as PFC, HUDCO, IDFC, IL&FS and REC for co-financing projects in the region.

5.5.3 Project Monitoring & Supervision

61. NCRPB should provide services towards project supervision post financial closure during the construction phase of projects. Such services may include appointment of an independent ('lenders') engineer and an auditor for ensuring that the project implementation is progressing in accordance with the agreed work-plan. This service may be provided as part of terms & conditions agreed upon at the time of execution of loan documents.

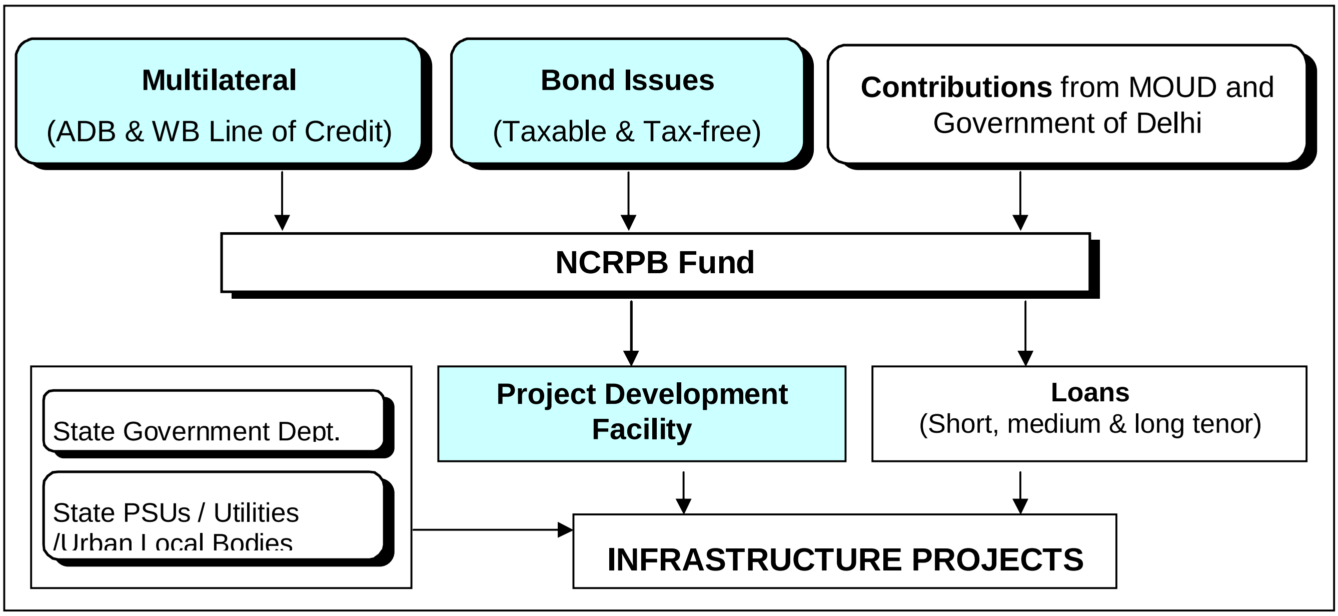


Illustration 4: *Medium Term Strategy for NCRPB funding* ***(Phase-II)***

Signifies new initiatives

5.6 Long term Strategy

62. In the long term say beyond 2012 (co-terminus with commencement of twelfth five year plan), NCRPB would strengthen its position as a catalyst for investments in infrastructure sector in the region. NCRPB would evolve from a pure-play lender to an intermediary which can conceptualise, develop, structure and finance a wide gamut of infrastructure projects in the region.

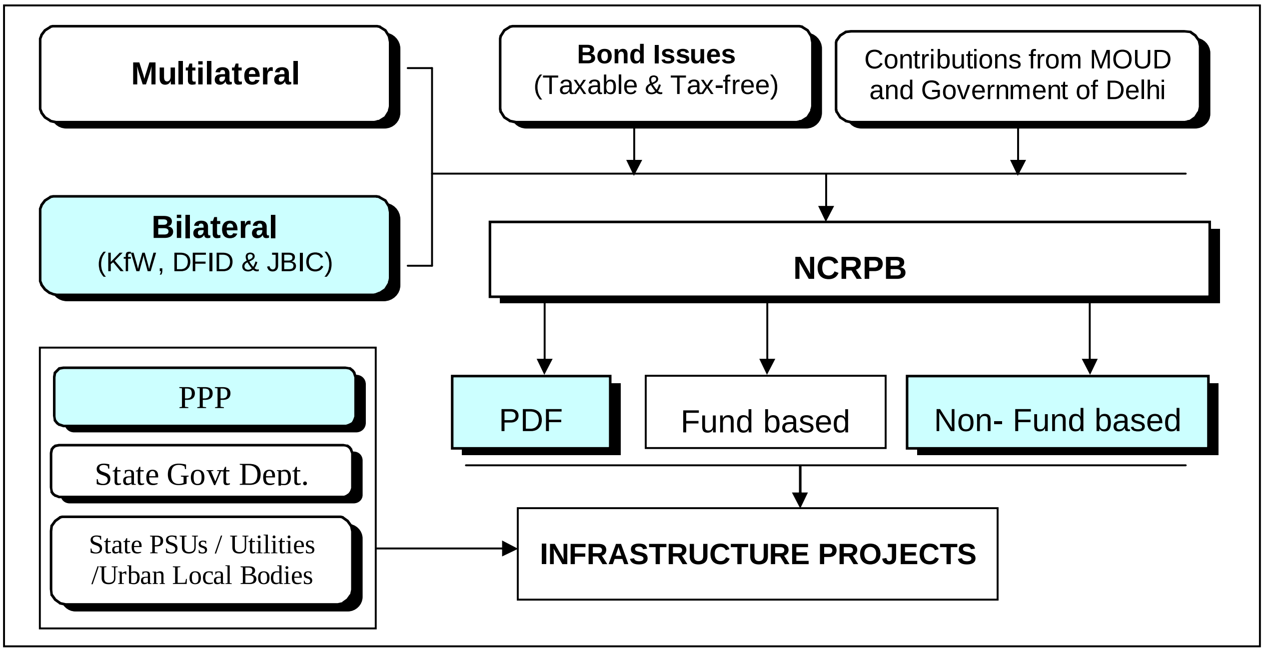


Illustration 5: *Long Term Strategy for NCRPB funding*

Signifies new initiatives

5.6.1 Completing on-going and new initiatives

a. Commence co-financing with other institutions for projects

b. Provide fund (sub-ordinate debt for PPP projects, credit enhancements through debt service reserve accounts) and non-fund based (Partial / Full Credit Guarantees) products. Non fund based offerings could be made either on the basis of existing credit strength or providing back-to-back guarantees from private sector financing windows of multilateral / bilateral agencies.

5.6.2 'Iconic' Projects

a. In this phase, we expect NCRPB to undertake financial closure for a few iconic projects developed by it in the earlier phase. The development models for such projects could range from PPP frameworks to conventional modes of implementation.

b. Such iconic project would typically be large projects having inter-state jurisdictions where NCRPB's role as a nodal agency would be to set-up dedicated Special Purpose Vehicles (SPV) and arrange seed-capital from key stakeholders. We envisage the role to be akin to Power Finance Corporation (PFC) in the case of Ultra Mega Power Projects where project preparation, land acquisition and clearances were arranged by PFC for a project domiciled in a dedicated SPV. PFC then offered equity stake in the SPV to a competitively procured developer at par for the project.

c. If it is found that the project is not amenable to implementation under a PPP framework, NCRPB could facilitate implementation in the conventional public sector mode. Projects could be implemented in frameworks similar to that of Delhi Metro Rail Corporation (DMRC).

5.7 Implementing the Roadmap

63. In order to effectively implement this strategy an assessment of the underlying financials would need to be undertaken. An assessment of the financials, the underlying assumptions and sensitivity analysis has been presented in the next section.

VI. PROPOSED FINANCING PLAN

64. The proposed financing plan looks at diversifying sources of financing to include multilateral agencies, bilateral agencies, domestic capital markets and commercial banks. In addition, the traditional sources of grant-in-aid from Ministry of Urban Development and Government of Delhi have been assumed to continue at similar levels. The financing plan has been assumed for the period 2009-2017 i.e. till the end of Twelfth Five Year Plan.

65. The incremental resource raising plan for the year ending 2017 has been assumed as the 'base case' as under:

(Rs in Lakhs)

Resources	Amount
Additional Borrowings	
ADB	400000
World Bank	400000
Additional Grants	
Government of Delhi	40000
MOUD	80000
Incremental Resources with NCRPB	**920000**

66. The assumptions for various sources of financing is assumed as under: Multilateral Sources of Finance: (a) It has been assumed that Asian Development Bank will provide $800 million line of credit to NCRPB with a maturity of 25 years, principal moratorium of 5 years and semi annual repayments. The expected date of effectiveness of the loan as 2010. The pricing for this source of finance has been assumed at all-inclusive 8.00% p.a. Front end-fees and other financing charges have been assumed at 0.20% payable upfront. It has been assumed that Government of India would waive the guarantee fee against the credit line to NCRPB. (b) We suggest that NCRPB also approach the World Bank for a line of credit with an expected effective date of 2011. Terms and conditions for this assistance are expected to be similar to that of Asian Development Bank. In the current economic situation, it would be prudent to approach multilaterals for long tenor lines of credit which would be priced competitively in comparison to domestic sources of credit.

6.1 Bilateral Sources of Finance

67. It is suggested that NCRPB should initiate dialogue with bilateral agencies such as JICA, KfW and DFID. While JICA and KfW can be tapped for accessing credit lines for specific sectors (JICA could be approached for projects in the transportation sectors, KfW could provide assistance for water and sewerage projects) dialogue with DFID should be initiated for seeking grant assistance for supporting/developing projects meeting social objectives such as in-situ slum housing.

6.2 Other Sources of Finance

68. Domestic sources could be accessed such as commercial banks for seeking short-medium term lines of credit, to meet temporary liquidity requirements. It is felt that domestic banks particularly those with whom NCRPB has banking relationships could be approached for providing fund based assistance.

69. Development authorities with surplus cash such as Delhi Development Authority could be approached to park their surpluses with NCRPB Fund.

70. While international sources of borrowing seem limited in the present global situation, it would be useful to continue tapping domestic capital markets with bond issues. It is suggested that NCRPB seek umbrella tax exemptions for its annual bond program.

71. NCRPB may also explore feasibility of floating municipal bonds (under Pooled Finance Scheme) for on-lending to municipal projects.

72. The phasing assumed for the sources of finance in the base case is as under:

Details	Units	ADB	World Bank
Amount of Debt	Rs in Lakhs	400000	400000
Tenor	Years	25	25
Year of First Disbursement	Year	2010	2011

6.3 Grant-in-Aid

73. It is expected that NCRPB would continue to receive annual allocations from Ministry of Urban Development and Government of Delhi. These allocations are assumed to continue at present levels.

6.4 Indicative Costs of Borrowing

74. It has been assumed that landed costs of borrowings from multilateral sources would be 200-250 basis points lower than domestic financing sources.

For base case scenario, the borrowing is largely expected from multilateral institutions for which the cost has been assumed at 8.00%. p.a.

For the Scenario mentioned above, the cost of loans have been assumed as under:

International Financial Institutions		
ADB	400000	8.00%
World Bank	400000	8.00%
	Average Costs	**8.00%**

75. The weighted average costs of borrowing for the two sources works out to 8.00% p.a. approx. Blending these sources with grants enables NCRPB to lower its costs further and provide loans at competitive terms to implementing agencies. However, we suggest that the borrowing be kept at a level that sustains the business model assuming current levels of Government grants. The resource raising program assumes that bulk of the resources will be drawn down till 2015. These assumptions can be changed for different sources of borrowing and depending upon the attractiveness of such sources under evolving market conditions.

6.4.1 On-lending rates

76. The average on-lending rates have been assumed at 9.00% p.a. for new sanctions. The interest rates on historic loan portfolio have been assumed to continue at terms sanctioned earlier. It is recommended that NCRPB look at its loan pricing strategy and move from a single rate to multiple rates and tenors depending upon sector and project viability. As an illustration, the following pricing structure has been worked out with an average portfolio pricing of 9.00% p.a.

Sectors	Proportion of Assistance	Pricing
Water Supply	15%	8.25%
Sewerage	10%	7.75%
Solid Waste	5%	8.25%
Power	35%	9.75%
Transport	35%	9.00%

6.4.2 Technical Assistance Facility

77. A technical assistance facility for preparation of master plans and city development plans, detailed project reports, environment and social reviews and project management consultancy has been assumed at 0.50% of new sanctions each year. In view of this technical assistance being provided as grants, it is recommended that NCRPB discontinue the present practice of providing incentives on debt servicing.

6.4.3 Manpower Costs

78. Manpower costs for both NCRPB as well as NCR cells are assumed to increase by 40% next year in light of pay commission recommendations. Subsequently, an annual growth rate of 5% each year is assumed.

79. Internal accruals for NCRPB over a projected period (2009-2017) under assumptions explained above aggregate to Rs 20838 lakhs. This computation assumes a bad debt write-off of 0.50% of total assets i.e. Rs 22723 lakhs over the projected period. This is evident from the graph below wherein there exists a positive marginal spread between the total income and expenditures of NCRPB in the years 2009-2012 and 2016-17.

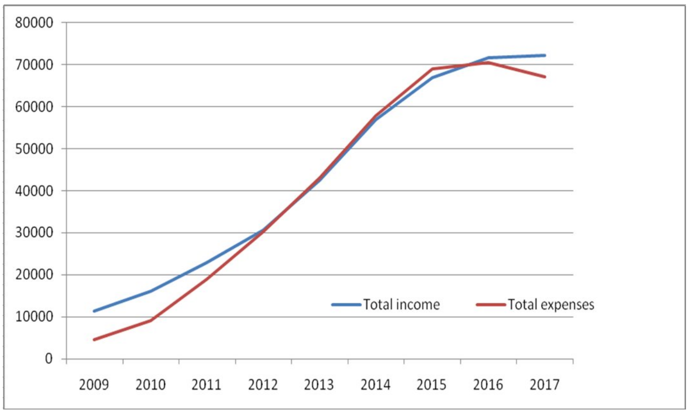


Illustration 7: *Projected Income and expenditure profile of NCRPB*

80. The declining trend in revenues is on account of assumptions made that a large part of borrowing would happen in earlier years. With time, repayment obligations on account of borrowings increase and net amount deployed reduce. This is function of the assumptions made and a sensitivity analysis can be undertaken.

81. However, it is important to realise that NCRPB Fund can support only a certain level of borrowings with current levels of grants on a sustainable basis. Further increase in borrowings will increase the cost of resources for NCRPB necessitating an increase from the present lending rates to ensure positive spread between the interest income and interest expenditure. In case it is felt that the interest levels need to be sustained at current levels, increased Government allocation for grants needs to be requested commensurate with the increased levels of borrowing.

82. NCRPB Fund balance is expected to increase from Rs 182290 Lakhs (2008) to Rs 323128 Lakhs

Illustration 8: *Year End Balance of NCRPB fund*

(2017) given the present method computing the Fund wherein the borrowings are accounted for outside the Fund. The depiction of growth in Fund balance is shown is the accompanying graph.

6.5 Analysis of Various Scenarios

83. Scenario Analysis has been undertaken assuming different borrowing programs. Different programs are:

6.5.1 Scenario 1

84. Borrowing from various other sources in addition to multilateral sources through incremental borrowings (Rs 210000 Lakhs). Such additional borrowings have been assumed for domestic sources of finance – loans and bond (taxable) issues and a KfW credit. The total resources raised from borrowings and grants will be Rs 1130000 lakhs. The income and expenditure trends for this scenario is in adjacent graph.

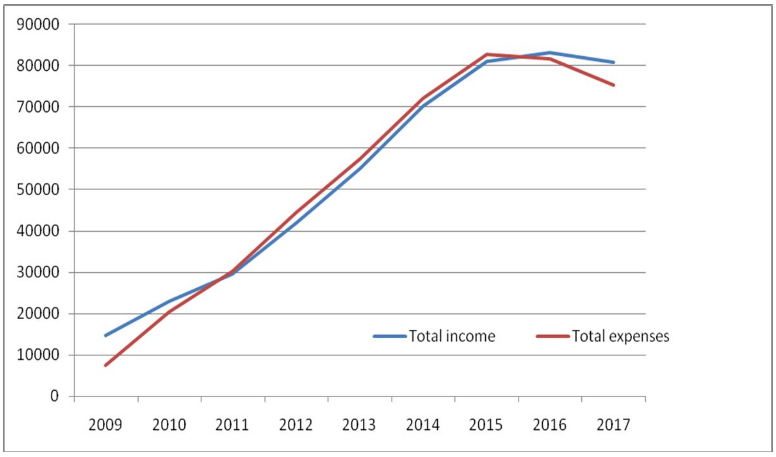


Illustration 9: *Projected Income and expenditure profile of NCRPB under scenario 1*

85. Cumulative internal accruals for this scenario are Rs 7988 Lakhs. The above graph indicates that it may be prudent to stagger borrowings so that income earned continues to be in excess of expenditure and cash flow mismatch is avoided.

86. Any addiitonal borrowings will result in operational losses for NCRPB. This would then necessitate the need for addiitonal grants to lower the costs of overall borrowings for NCRPB.

6.5.2 Scenario 2

87. Resources raising from debt and grants to an aggregate of Rs 1500000 lakhs. This includes grants and soft loans of Rs 270000 lakhs – an addition of Rs 150000 lakhs incl. Rs 10000 lakhs of soft loans . Borrowings of Rs 1230000 lakhs have been assumed (Rs 100000 lakhs as domestic loans, $ 200 mn from KfW and Rs 230000 lakhs as bonds, apart from the multi-lateral borrowings from ADB and World Bank assumed earlier).

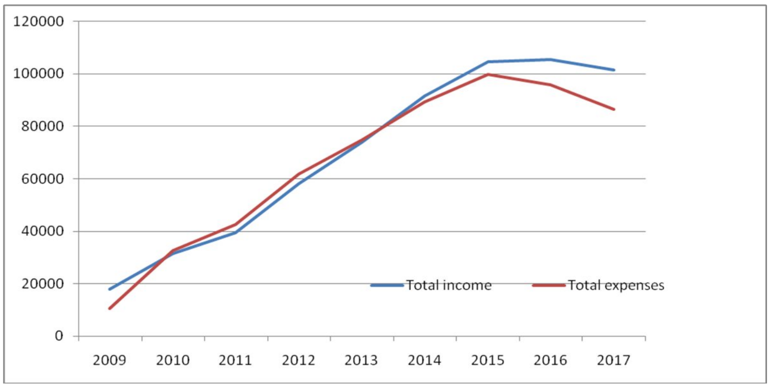


Illustration 10: *Projected Income and expenditure profile of NCRPB under scenario 2*

88. Cumulative internal accruals for this scenario are losses of Rs 48369 Lakhs. Clearly, this level of gearing is not sustainable with assumed levels of grants (Rs 80000 Lakhs from MOUD, Rs 40000 Lakhs from Government of Delhi and a $ 100 million – Rs 50000 Lakhs as grants from DFID).

89. This implies that NCRPB ambition of supporting Rs 15000 crores of projects under the Eleventh Five Year Plan with current pattern of providing 75% of project costs in the form of loans is extremely ambitious but not entirely realistic. Clearly, NCRPB's ability to support incremental borrowings on a sustainable basis is linked to quantum of grants and ability to garner low cost sources of finance. This strategy needs to be reworked ensuring higher returns on the loan portfolio and lower levels of non-performing assets in case the objectives set out have to be met. Alternatively, NCRPB can restrict its borrowings to sustainable levels and support additional projects through co-financing and leveraging through Public-Private-Partnership models as discussed earlier in this note.

90. These scenarios are indicative and the implementation strategy for the financing plan would evolve through consultations with the Client and other key stakeholders.

VII. Risk Assessment & Mitigation

91. The risks associated with the financing plan enunciated in the earlier section needs to be assessed and a suitable mitigating strategy needs to be evolved.

7.1 Demand Risk

92. The Financing Plan assumes that availability of long term funding with appropriate technical assistance would drive investments in NCR region. The success of this approach hinges on effectiveness of the technical assistance program for project preparation and the assumption that once projects are prepared, states would proceed to implement the same through borrowed resources. If the project pipeline is not robust, it may lead to under deployment of the resources available with the fund, with concomitant implications for investments in the region. In order to mitigate this risk, it is important for NCRPB to identify projects for development in consultation with stakeholders such as State Governments and Line Ministries so that the likelihood of project implementation is high. As part of this strategy, we have recommended that NCRPB support the formulation of City Development Plans for major urban centres in the region so that project investment can be prioritised in consultation with stakeholders.

7.2 Credit Risk

93. In case NCRPB decides to pursue an aggressive investment strategy based on a large scale borrowing program, it is important to ensure credit quality remains at acceptable levels, or NCRPB would be saddled with higher levels of NPAs. Therefore, it is important to put in place a suitable appraisal and credit risk management systems, as envisaged under this Technical Assistance from ADB. Given the wide spectrum of projects, which can be supported by the fund, it is possible that viable projects in some sectors may take off vis-à-vis others. Further, adherence to strict appraisal norms and choice of appropriate credit enhancements will mitigate the risks of non-performing assets.

7.3 Interest Rate Risk

94. Despite best efforts of the NCRPB to keep its pricing competitive, there may be a situation where excess liquidity results in predatory pricing by number of other financial intermediaries. There may be a situation where the absorption capacity of projects and borrowers for long tenor financing (linked to multilateral sources of finance) may not be high due to competition from such intermediaries. NCRPB should attempt to have a diversified resource base and a low blended cost of resources. This risk can be mitigated by diversifying NCRPBs product base and having the flexibility to alter on-lending rates across products. There is a need to move away from the present fixed interest rate regime to a more market-responsive on-lending regime.

7.4 Government Guarantee as Credit Enhancement

95. In the past, NCRPB has financed projects based on credit support from the state governments in the form of guarantees. In the present situation, the fiscal constraints faced by state governments would make it increasingly difficult for them to provide guarantees to NCRPBs borrowers. NCRPB needs to alter its current paradigm of lending to infrastructure projects based on credit enhancements from state governments to that of inherent credit fundamentals of borrowers and cash flows of projects.

7.5 Varying Financial Risk Appetite across States

96. In the recent past, implementing agencies from Haryana have been proactive in seeking NCRPB assistance leading to credit concentration in NCRPBs loan portfolio. In this context, NCRPB has already initiated dialogue with other State Governments in the region. NCRPB needs to work closely with State Governments to assess the investment requirements. NCRPB would also have to use innovative loan structures with interest rates and tenures linked to improvement in financial profile of borrowers. The willingness and ability of NCRPB to take calculated risks, invest/support distressed assets and provide continued support for a pragmatic reform program to improve credit fundamentals is what will drive demand for NCRPBs resources

7.6 Foreign Exchange Risk

97. The fund corpus of NCRPB envisages a sizable proportion of corpus as loan from multilaterals and bilateral. Since the loan would be denominated in foreign currencies (United States dollars, Euro, Japanese Yen) the costs associated with managing the foreign exchange volatility may be sizable. NCRPB needs to develop treasury management skills. Mitigating foreign exchange risk can be undertaken by entering into 5-10 year rolling hedging options available in the country today.

7.7 Asset-Liability Management Risk

98. While liabilities for the fund are largely long-tenor, their deployment would vary from 5-20 years. In such as scenario, asset-liability management would pose a challenge to NCRPB. The strategy should be to ensure its corpus is fully committed at all times. NCRPB should attempt to match the maturity profile of assets with its liability profile. The current practice is to lend for a tenor of 10 years based in similar tenors of its bond issues. Such practice should be continued for the overall resource pool as well as outlined in the product strategy.