

TERMS OF REFERENCE

*(Review/update Study of Road Financing Mechanism Study
for Himachal Pradesh)*

(Lump Sum Cost)

SHORT DESCRIPTION

The objective of the study is to articulate reforming road funding in the state and recommend the operating modalities that new financing arrangements might adopt.

BACKGROUND

After the successful completion of Himachal Pradesh State Road Project – I (HPSRP – I), the World Bank has signed another tripartite loan agreement with Government of India and Government of Himachal Pradesh offering USD 82 million loan for execution of Himachal Pradesh State Road Transformation Program (HPSRTP). Building on the achievements of HPSRP – I, the HPSRTP is aimed to enhance the efficiency of the transportation, logistics and Road Safety institutions and improve priority Major District Roads (MDRs) to stimulate horticulture and overall economic growth in the Himachal Pradesh.

HPSRTP has multifaceted objectives and sub objectives including institutional development, improve road safety, promoting green and safe corridor initiative, improving road maintenance etc.

For effective implementation, the project has been divided under the following 3 components:

1. Component 1 – Strengthening HP's transport institutions and building resilience: This component involves reestablishment of HPRIDCL, commercialization of direct labor operations, and establishing HP Motor Vehicle Administration (MVA).
2. Component 2 – Developing transport corridors and complementary facilities, and a logistics system for HPs horticulture and overall economic growth: Activities under this component include upgradation works on select core road network corridors of the state, and designing and piloting a logistics system to support horticulture growth in the state aligned with other WB operations in the sector.
3. Component 3 – Enhancing road safety: This component will involve implementation of 'the safe system' and 'the safe corridor initiative' which will include support to improve road accident data management and enforcement on state roads on select high-traffic and high-risk corridors of the state.

The Implementing Agency for this high-valued World Bank-funded Project, HP Roads and Infrastructure Development Corporation Limited (HPRIDCL), represented by the Chief Engineer-cum-Project Director had undertaken an Institutional Reforms study under the Component 1 of HPSRTP. Now, HPRIDCL intends to implement the recommendations approved as a part of the Institutional Reforms study to strengthen its capacity and build institutional excellence for higher economic growth. Accordingly, for support to the creation

of dedicated road financing mechanism and broadening the finance base, the existing Road Financing Mechanism Study requires review/update for Himachal Pradesh has been envisaged.

Earlier Himachal Pradesh Road Sector Finance Study has been carried out by the Consultant “PricewaterhouseCoopers Private Limited (PwC)” in the Year 2006-07 and accordingly Final Road Fund Report for Himachal Pradesh Road Sector Finance Study was submitted by PwC in March 2007. This Report presents the total intended requirements of the Road Fund to maintain and upgrade state core road networks for the period 2006-2016 and also the sources of revenue for HPRIDCL. The existing study needs to be reviewed/updated for the current scenario and prepare a financing model that identifies projected revenues from current sources, investment requirements for upcoming projects, and the financing gap under different economic growth and implementation capacity assumptions over a 10-year time frame for the period 2023-2033. Accordingly, HPRIDCL has initiated a process to appoint a Consultancy firm for this assignment.

Road transport is the dominant transport mode in the State of Himachal Pradesh. The total length of the network in the State is about 39,949 km, of which almost all are managed by the HP Public Works Department (PWD). About 28,908 km of total network is surface treated and the balance has water-bound macadam /earth surface. The category –wise details of road network are given in table 1 below. Other lower category roads are owned and managed by Forest Department, and Urban Local Bodies.

Table 1 : The road network in Himachal Pradesh

A	National Highways	2,023 Kms.
B	State Highways/ Major District Roads	4,703 Kms.
C	Rural Roads	31,700 Kms.
D	Border Roads	569 Kms.
E	Jeep able / Bridal Paths	954 kms
	Total Length	39,949 Kms

Over 80 percent of the road network comprises of rural roads. In terms of connectivity, out of a total of 17,882 villages, 10,591 stands connected with all- weather roads.

Table 2: Present connectivity of Villages and Villages required to be connected

No. of Villages		
Total	Connected	Unconnected
17,882	10,591	7,291

Due to geographical mountainous region, limited Rail and Air connectivity, Road transport

is the dominant transport mode in the State of Himachal Pradesh. Presently, road network in the state is developed and maintained by the Himachal Pradesh Public Works Department (HPPWD) and Himachal Pradesh Road and other Infrastructure Development Corporation Limited (HPRIDCL). While HPPWD manages and maintains major portion of the road network, HPRIDCL has been mandated with the responsibility of upgradation and maintenance of core road network in the state. At present, the total length of the road network in Himachal Pradesh is 39,949Kms.

The road sector suffers from a number of challenges. These include:

- Absence of private sector participation in development and financing of the sector;
- Absence of a stable maintenance financing is a major challenge for the sustainability of the state road network;
- Inadequate attention to road operation, especially road safety;
- Limited implementation of performance based road maintenance contracts; and
- Insufficient investment in the core road network given the rapidly growing demand for road transport services;

Currently, maintenance of state roads is financed through budgetary allocation from central and state governments. Annual **maintenance allocation** over the last five years was on the average about INR 450 crore per year. However, the allocations only cover about 64 percent of the total demand. Budgetary provisions for **construction and improvement** of roads and bridges are made through State budgetary support, Central Road Fund (CRF), Pradhan Mantri Gram Sadak Yojana (PMGSY) and National Bank for Agriculture and Rural Development (NABARD).

Given the scarcity of funds available for road sector development, the World Bank, under its Himachal Pradesh State Road Transformation Project (HPSRTP) aims to bridge the gap between current available funds and the investment required for the upkeep of the entire road network of the state. One option under consideration is the creation of a road fund. Other options may include revenue generation through taxes, user fees, and some sort of revenue-sharing options with the private sector/SPVs.

Internationally, there is a growing consensus that road users need to be persuaded to pay the money for good quality road having comfort, time, and cost savings. The key ingredient is to achieve this through a public-private oversight mechanism and application of modern business practices to persuade the road users that:

- additional money will be spent on roads;
- that the work will be done efficiently; and
- they will have a say in the setting of priorities.

To be able to convince the road users to pay more for road use, it is imperative to know exactly how much they are contributing, directly or indirectly, for the road sector.

Moreover, there is a lack of consensus and clarity about how such a road financing mechanism might work in practice and which roads and road-related expenditures it might be used for. Further, to understand the list of funding and financing options available to the government. The GoHP now wishes to onboard a team of consultants, hereafter referred to as the Consultant, to fulfill the terms of reference mentioned below.

OBJECTIVES

The objective of this assignment is to identify sustainable road financing and funding mechanisms and broaden the financial base for road development and maintenance in Himachal Pradesh.

The specific objectives of the study are to:

Overall understanding:

- (i) Define the road financing problem
- (ii) Assess the current road sector funding and financing by identifying all current sources of revenue with their historical trends
- (iii) Estimate the financial requirement for development and maintenance of the road network to meet the demand arising from projected traffic growth & economic development of the State, including the new tunnels that reduce distance.

Creation of dedicated financing mechanism for road and transport infrastructure development:

- (iv) Support in creation of dedicated road financing mechanism and develop and articulate the cases for and against the establishment of a road/infrastructure fund and/or any other such revenue generation mechanism that provides stable flow of financing for the sector;
- (v) Identify options and recommend solutions for generating revenues through (a) indirect charges on users; (b) directly tolling the users by GoHP or through innovative PPP contracting modalities such as BOT Annuity/ Hybrid Annuity; (c) land value capture tax/levy; (d) promoting Transit Oriented Development (TOD) around nodal points by attracting private investment for developing tax revenue generating facilities (freight consolidation terminals, bus terminals, real-estate and businesses); (e) annuity programs; and (f) other innovative financing mechanism.
- (vi) Suggest a mechanism into which the above road-related revenues will flow and then ways to manage the identified eligible expenditures for the roads under the HPRIDCL and HPPWD; and transport infrastructure to be developed by HPDOT

Sustainable financing for maintenance:

- (vii) Prepare a detailed maintenance financing strategy and annual financing plan for roads and bridges to eliminate the backlog of maintenance and sustain the asset. The strategy and plan should be implementable and realistic, taking into account budget

constraints, and provide prioritization of the optimal resource allocation to achieve the target of eliminating the backlog in the specified timeframe;

- (viii) Prepare and adjust annually the financing plan with prioritization, and provide guidelines and manuals how to prepare such adjusted annual plans and re-prioritization under the long-term financing strategy;
- (ix) Recommend a sustainable financing scheme, including possible road maintenance fund and broadening the financing base to include new/ innovative sources of financing such as fuel levy, vehicle licensing fee, distance & congestion charges, charges for non-standard/ heavy vehicles,
- (x) Identify initiatives and contracting modalities to ensure sustainability by commercializing maintenance execution;

International Benchmarking:

- (xi) Benchmarking International standards and practices for road financing and strategies for long-term financial sustainability of the sector;

Transition Strategy:

- (xii) Draft a plan/strategy for implementing the transition from the current situation to the full operation of managing the funding and financing of the road sector as mentioned above.

SCOPE OF SERVICES

Earlier Himachal Pradesh Road Sector Finance Study has been carried out by the Consultant "PricewaterhouseCoopers Private Limited (PwC)" in the Year 2006-07 and accordingly Final Road Fund Report (attached with this ToR) for Himachal Pradesh Road Sector Finance Study was submitted by PwC in March 2007. The Consultant will review the Road Fund Report submitted by PwC and will undertake the following tasks. However, the Consultant is encouraged to propose reasonable modifications or additions to these tasks in his technical proposal. Task 1 – Demonstrate and Define the Road Financing Problem

1. *Assess road user charge regime* – Undertake a comprehensive review of the current and earlier (at least over the past 10 years) road transport-related taxes, fees and charges regime including:
 - Examine existing regime structure of road user charges for each main vehicle type and comparison of annual payments of each vehicle with the estimated costs.
 - Separate all payments made by road users into general taxes, service fees and implicit and explicit road user charges based on the consultant's best estimate of suitable category;

- Classify charges between *access charges, road user charges, and externalities charges*;
 - Estimate the total burden of taxation/charging borne by different classes of road users;
 - Identify any problems in terms of the administration of these taxes, fees and charges e.g. in terms of rate levels, uniformity, complexity, collection, and enforcement;
 - Examine the taxes imposed on transport fuels and identification of the objectives underlying tax rates;
 - Estimate the total government expenditure on the development and maintenance of road infrastructure incurred by all road agencies in the state;
 - Identify part of fuel taxes or charges paid by the non-road users and mechanisms, if any, used to redress this;
 - Estimate the future trends of motor vehicle ownership and use; and establish a rough quantitative relationship between vehicle fleet and revenues collected from the road sector and correlate road user charges with the actual expenditure on the road network;
 - Estimate the portion of total taxation/charging imposed on road transport being returned to the sector, and determine the funding gap.
 - Recommend changes to the level and instruments used to collect road user costs, ensuring that avoidance, evasion and leakages are minimized.
 - Identify other possible new/ innovative forms of road users charges (vehicle ownership, vehicle usage, congestion charges, non-standard & heavy vehicle charges, etc.) and assess their applicability to the state of HP
2. *Identify Road Network Financing Requirements – Prepare a model that identifies projected revenues from current sources, investment requirements for upcoming projects, and the financing gap under different economic growth and implementation capacity assumptions over a 10-year time frame. This would involve:*
- a review of the various road network needs projections and their underlying assumptions;
 - establishment of a baseline for road categories and types/levels of development and maintenance activities;
 - adoption of reasonable unit costs considering the terrain condition of the state and incorporating resilience activities which are crucial to the state of HP;
 - plan to effectively utilize existing resources; and
 - assessment of the capacity to effectively utilize resources.
3. *Allocation of sector funding – Review the tools and mechanisms used for allocating available sector resources between (i) types of road works (new development,*

rehabilitation and maintenance) (ii) geographic areas (hilly and plain) and (iii) road categories (National Highways, Major District Roads and Rural Roads). Identify strengths and weaknesses in this allocation system.

4. Determine the scope of the dedicated road funding mechanism. Determine the type of road expenditure that can be financed under this mechanism – operations, maintenance, new construction, traffic safety, administration. Determine the model for allocating the funding from this mechanism.
5. Assess the potential for commercializing maintenance execution through Performance based contracts.
6. Undertake a national and international comparison with other countries to benchmark the state's road sector taxation and public sector expenditure levels and policies with economies at comparable stages of development.

Task 2 – Articulate business cases for and against a dedicated road funding/financing mechanism/s

1. Provide a brief overview of the international and national best practices of dedicated road funding mechanisms. Identify the key characteristics that maximize the potential for such mechanisms.
2. Explore modalities in setting up a dedicated road financing mechanism for the state and revenue generating mechanisms to ensure its long-term sustainability;
3. Consult with key stakeholders for determining their opinion on establishment of a dedicated road financing mechanisms and its feasibility and document their views;
4. Articulate and quantify (wherever possible) the specific benefits and costs – financial, institutional, social, political or other – that might be associated to road sector development in the state. Show how the allocation of these benefits and costs might be distributed amongst various stakeholders in Himachal Pradesh;
5. Prepare a matrix summarizing the advantages and disadvantages of the creation of such dedicated road funding/financing to the major stakeholders inside and outside government.

Task 3 – Identify options and recommend solutions for establishing a dedicated road financing mechanism

The Consultant shall identify various options and recommend the preferred options for the following:

1. Appropriate sources of revenues, including short and longer term borrowing, direct and indirect charging of road users and other beneficiaries (exploiting increased land values by the road side or exploiting possibilities of revenues through use of the right of way etc.);
2. Changes, as necessary, in current road user charges or imposition of new charges based

on the review in task 1 and task 2, applying the principle that extra spending on roads must come from extra payments by roadusers;

3. Various revenue generating options for the fund including direct & indirect road user charges, innovative contracting modalities, etc.;
4. Eligible expenditures for the road fund and allocation between different types of expenditures;
5. Develop a fund flow mechanism to manage the sector expenditures;
 - Recommend the indicators to be used by the oversight group/ mechanism to measure its effectiveness (e.g. administrative costs/total funds disbursed, average time taken for payment of invoices or transfer of funds, actual versus required maintenance funding, etc.)
 - Prepare a maintenance strategy and prioritized financing plan
 - Recommend suitable financial report arrangements, together with appropriate internal and external auditing arrangements.
 - Propose the nature of the regular reports to be prepared for submission to Finance Department, Cabinet, etc. as well as reports that shall be published externally.
 - Develop an oversight mechanism like considering the involvement of the Planning Board or development of a separate Road Fund Board, etc.

Task 4 – Draft an Implementation Plan

- Prepare a realistic plan showing the major milestones in the transition from the current arrangements to full operation of the final recommended form of dedicated funding and mechanism/s.
- The plan should include identifying responsibilities for undertaking activities, any necessary training of staff and the oversight arrangements to ensure that the plan is implemented to schedule.

METHODOLOGY

The consultant will be expected to work closely with relevant government departments. As a minimum, the Consultant shall undertake **two workshops at Shimla** with officers from all the concerned government departments. One near the beginning of the service and the other towards the end, to be agreed with the client. The consultant shall bear the expenditures involved in organizing these workshops.

Further, the Consultant shall be required to present each deliverable to the advisory committee for gaining their inputs/ comments and observations and make necessary amendments.

REPORTING

The HPRIDCL will appoint a contact person for better coordination with the Consultant. For technical purposes, the Consultant will be guided and monitored by an Advisory Committee comprising:

(a) Advisory Committee:

- Senior Officers from PWD
- Senior Officers from Transport Department
- Senior Officers from Finance Department
- Executive Director (Design)-Cum-Superintending Engineer (Planning & Design) State Roads Project, HPRIDCL
- General Manager (F&A)- cum-Joint Controller (F&A), State Roads Project, HPRIDCL

INPUTS

The duration of the consultancy assignment shall be **6 months**. The work is estimated to require about 18 expert-months of Key Experts with minimal support staff input of eight months. The CVs of the following three key staff shall be evaluated:

- Infrastructure Finance Specialist
- Transport Sector Expert
- Public finance specialist

The list of suggested Key Experts to be proposed by the Consultant is shown below. These key personnel will be supported by adequate technical, public finance and other support staff throughout the tenure of this assignment.

Position	Job Description	Minimum Qualification of Proposed Staff
Infrastructure Finance Specialist	To act as a Team Leader	The candidate should have a master's degree in business administration (finance) or equivalent with about 15-17 years experience out of which at least 3-5 years in financial mechanism and project structuring of private sector infrastructure projects. Thorough knowledge on state finances, budgetary and expenditure procedures and key trends and / or issues affecting the sustainability of the State's Road infrastructure investment plans. Experience and knowledge in use of latest computer software and /or other equivalent evaluation models is essential. The candidate will preferably have work experience in hilly or similar terrain on transportation projects and tangible experience outside India. The candidate must have in-depth knowledge of financial analysis and economic evaluation.

Transport Sector Expert	Analysis of Road Transport sector and Road Funding	The candidate should have a Masters degree in economics or equivalent with about 12-14 years experience out of which 5-7 years on transport projects. Experience and knowledge in use of latest HDM-IV and/or other equivalent evaluation models is required. The candidate should have experience on transport project for at least 3-5 years in developing countries, particularly in Asia. Experience of evaluating major projects to the requirements of international financing institutions, such as World Bank, is preferred. The person should have in-depth knowledge of transport demand analysis, vehicle operating costs, total transportation costs and economic evaluation. Experience on project benefit evaluation and monitoring is also important.
Public finance specialist	To look into the avenues of public financing	MBA in Finance / CA with 7-9 years of experience in the relevant field out of which 2-3 years on transport projects . He must have experience in the development of financial models, studies related to financial sustainability and formulation of financing strategies for State PWDs/ Road Agencies/ Transport Agencies.

DELIVERABLES

The consultant will provide the following Deliverables:

Item	No. of copies	Due date (Months from start of Services)
Assessment Report		
Draft	10	2
Final	10	3
Road Fund Report		
Draft	10	4
Final	10	6
Presentation to Advisory Committee at initial workshop	1	2
Presentation to Advisory Committee at Final workshop	1	5

TERMS OF PAYMENT

The mode of payment to be made in consideration of the work to be performed by the

consultant shall be as follows:

(i)	20 % of Contract Price	On submission of draft assessment report to client
(ii)	30 % of contract Price	On submission of final assessment report to client
(iii)	20 % of contract Price	On submission of draft road fund report to client
(iv)	30 % of contract Price	On submission of final road fund report to client

Note- The Consultant will be paid ONLY after submission and acceptance of deliverables by the advisory committee.