



Affordable Housing Financing – Public Private Partnership (PPP) Models

Introduction:

There are a number of challenges facing for affordable housing and slums development, which are:

- (a) High cost of land;
- (b) Financing the land by builder/developer.
- (c) The lack of clear title of document is a serious deterrent for participation by financial institutions and real estate developers.

For any strategy to enhance the provisioning of affordable housing/slum therefore, government interventions through financial and non-financial support as well as through policy reforms financial subsidies (e.g. in the form of government land) as well as cross-subsidies will have to play a central role in addressing the problem. The potential for directing privately owned land towards affordable housing at a low cost is limited, appropriate PPP structures can be used to incentivize the private sector in this direction.

Key Objectives of using PPP in Affordable Housing/Slums:

The fundamental strategy underlying Public Private Partnerships as an implementation strategy for affordable housing is to combine the strengths of the private sector with those of the public sector in order to overcome challenges faced by affordable housing. The policies and contractual structures to be created for different PPP strategies to address the challenge of affordable housing. The housing created under this PPP strategy will effectively be in the form of a subsidy consisting of public lands provided by government to low-income groups. These programs should be at the heart of the approaches to address the affordable housing challenge. These re-development projects can co-create affordable housing along with commercial buildings and high-end housing.



PPP Models for Affordable Housing/Slums:

Models involving Government Lands and Private Partnership

Model 1: Government-land Subsidized

Model Description:

The public authority will provide land to the selected private developer at any pre-defined controlled price. This would effectively constitute a state subsidy for the project. The private developer will be responsible and held accountable for designing, building and financing of affordable housing stock and associated services of predetermined standards, at a pre-determined cost and within a pre-determined time. The public authority will undertake to compensate the private developer for the housing stock on the satisfactory completion and handing over of the units, as per prescribed standards, cost and time. The payment to the private developer shall be based on milestones-based project progress. The Public Authority shall establish specific milestones that are based upon the completion of identified deliverables and have a milestone payment reflect the value of the completion of that work and the acceptance of those deliverables. The allottees would be required to make payment of a pre-determined amount for the cost of the housing unit at the time of handover.

Salient Features:

Preparation of technical guidelines by Public Authority: The public authority shall prepare technical guidelines for the purpose of project implementation.

Design Build & Finance by Private Sector: The private sector will be responsible and held accountable for designing, building and financing of affordable housing stock.

Maintenance by the Beneficiary: There is no involvement of private sector and government for the maintenance of the units after the transfer of units to allot tee.

Public Authority to compensate the Private Sector Partner: The public authority will undertake to compensate the private developer, through milestone-based payment schedule.

Beneficiary Identification by Public Authorities: The establishment of the eligibility of beneficiaries will be the duty and the prerogative of the government.

Distribution: The housing stock will be transferred by the private sector to a government department or agency nominated by the government.

Payments by Allottees: The allottees would be required to make payment of a pre- determined amount for the cost of the housing unit at the time of handover.



Financial Assistance to Allottees: Loans at an appropriate rate of interest and appropriate tenure could also be made available through housing finance institutions or other intermediaries to the allottees for this purpose.

Public Private Partnerships for Trunk Infrastructure: The responsibility for the trunk infrastructure and connectivity will be borne by the public sector.

Risk Sharing: In this way the responsibility for land, subsidy, and trunk infrastructure will be taken by the public authorities.

Bid Parameter: A good bidding strategy, under this model, would consist of selecting the private developer based on per unit cost as the bid parameter.

Table 1: Matrix of Model 1

Risks	Risk Allocation			
	Government	Private Developers	Financial Institution	Beneficiary
Land	Yellow			
Design	Yellow	Yellow		
Construction		Yellow		
Maintenance				Yellow
Financing		Yellow		
Cost Recovery	Yellow			
Off-take	Yellow	Yellow		
Trunk-Infrastructure	Yellow			
Credit Risk			Yellow	

Model 2: Mixed Development Cross-subsidized Housing

Model Description:

The essential difference in this model from model 1 will be that the developer does not receive any



payment from the public authority for providing the affordable housing stock. The private developer will be allowed to build and sell high-end housing on a portion of the land allotted. The private developer could even be allowed to utilize the entire land made available by government for high-end housing in exchange for providing affordable housing at another location, on land to be arranged by the private developer, provided that the characteristics of the other land are similar as that provided by the State.

Salient Features:

Land as Subsidy: The land will be provided by public authorities on lease of reasonable term (preferably on a nominal lease rental) to the selected private developer co-terminus with the agreement period. This would effectively constitute a state subsidy for the project.

Preparation of technical guidelines by Public Authority: The public authority shall prepare technical guidelines for the purpose of project implementation with necessary.

Design Build & Finance by Private Sector: The private sector will be responsible and held accountable for designing, building and financing of affordable housing stock .

Maintenance by the Beneficiary: There is no involvement of private sector and government for the maintenance of the units after the transfer of units to allottee.

Cost Recovery by Private Sector Partner: The private developer will recover the cost of affordable housing through the revenue generated from high-end housing.

Beneficiary Identification by Public Authorities: The establishment of the eligibility of beneficiaries will be the duty and the prerogative of the government.

Distribution: The housing stock will be transferred by the private sector to the government or to an agency nominated by the government.

Payments by Allottees: The allottees would be required to make payment of a pre- determined amount for the cost of the housing unit at the time of handover.

Financial Assistance to Allottees: Loans at an appropriate rate of interest and appropriate tenure could also be made available through housing finance institutions and the allottees could also be built into financial subsidy regime.

Public Private Partnerships for Trunk Infrastructure: The responsibility for the trunk infrastructure and connectivity will be borne by the public sector. However, the government could undertake the financing and implementation of the same through separate PPP arrangements or directly.

Risk Sharing: The responsibility for land, subsidy, and trunk infrastructure will be taken by the



public authorities while the performance risk and cross subsidy will be transferred to the private sector.

Bid Parameter: Since the goal of this model is to maximize affordable housing at minimum cost to government, the number of affordable housing units.

Table 2: Matrix: Model 2

Risks	Risk Allocation			
	Government	Private Developers	Financial Institution	Beneficiary
Land				
Design				
Construction				
Maintenance				
Financing				
Cost Recovery				
Off-take				
Trunk-Infrastructure				
Credit Risk				

Model 3: Annuity Based Subsidized Housing:

Model Description:

As in Model 1, government will provide land under this model as well. The key difference in this model will be that the developer receives revenue from the government in the form of regular annuity payments for a period of time (upto 10 years) instead of a lump sum amount at the time of handover.



Salient Features:

Land as Subsidy: Under this model, land will be provided by public authorities on a long-term lease (preferably on a nominal lease rental) to the selected private developer co-terminus with the agreement period.

Preparation of technical guidelines by Public Authority: The public authority shall prepare technical guidelines for the purpose of project implementation.

Design, Build & Finance by Private Sector: The private sector will be responsible and held accountable for designing, building and financing of affordable housing stock.

Maintenance by the Private Developer: The private developer is held accountable not only for the construction but for the medium to long-term maintenance of the housing units as well.

Public Authority to enable Cost Recovery by Private Sector Partner: The public authority will undertake to compensate the private developer for the housing stock on the satisfactory completion and handing over of the units as per prescribed standards, cost and time.

Beneficiary Identification by Public Authorities: The establishment of the eligibility of beneficiaries will be the duty and the prerogative of the government.

Distribution: The housing stock will be transferred by the private sector to the government or to an agency nominated by the government.

Payments by Allottees: The allottees would be required to make payment of a pre-determined amount for the cost of the housing unit at the time of handover.

Financial Assistance to Allottees: Loans at an appropriate rate of interest and appropriate tenure could also be made available through housing finance institutions.

Public Private Partnerships for Trunk Infrastructure: The responsibility for the trunk infrastructure and connectivity will be borne by the public sector.

Risk Sharing: The responsibility for land, subsidy, and trunk infrastructure will be taken by the public authorities while the performance responsibility will be transferred on the private sector.

Bid Parameter: The bid parameter would be the annuity amount due to be paid every year.



Table 3: Model 3

Risks	Risk Allocation			
	Government	Private	Financial	Beneficiary
Land	Yellow			
Design		Yellow		
Construction		Yellow		
Maintenance		Yellow		
Financing		Yellow		
Off-take	Yellow	Yellow		
Trunk-Infrastructure	Yellow			
Credit Risk			Yellow	

Model 4: DBFMT –Annuity cum Capital Grant based Subsidized Housing

Model description:

This model is similar to the Model 3: DBFMT Annuity Model, except that under this model a significant proportion of project cost (say 40-50%) is paid to the private developer during the construction phase . The remaining amount is paid to the developer as an annuity for upto 10 years after the successful completion of the project. The annuity amount will of course be lower under this model than under Model 3 since the developers will also receive a capital grant. The capital grants payment to the private developer shall be based on milestones-based project progress.

Salient Features:

Land as Subsidy: Under this, land will be provided by public authorities on a long-term lease (preferably on a nominal lease rental) to the selected private developer co-terminus with the agreement period.

Preparation of technical guidelines by Public Authority: The public authority shall prepare technical guidelines for the purpose of project implementation.

Design, Build & Finance by Private Sector: The private sector will be responsible and held accountable for designing, building and financing of affordable housing stock .



Maintenance by the Private Developer: The private developer is held accountable not only for the construction but for the medium to long-term maintenance of the housing units as well.

Public Authority to enable Cost Recovery by Private Sector Partner: The public authority shall undertake to compensate the private developer through milestone-based payment schedule for the housing stock on the satisfactory completion and handing over of the units as per prescribed standards, cost and time.

Beneficiary Identification by Public Authorities: The establishment of the eligibility of beneficiaries will be the duty and the prerogative of the government.

Distribution: The housing stock will be transferred by the private sector to the government or to an agency nominated by the government.

Payments by Allottees: The allottees would be required to make payment of a pre- determined amount for the cost of the housing unit at the time of handover.

Financial Assistance to Allottees: Loans at an appropriate rate of interest and appropriate tenure could also be made available through housing finance institutions.

Public Private Partnerships for Trunk Infrastructure: The responsibility for the trunk infrastructure and connectivity will be borne by the public sector. However, the government could undertake the financing and implementation of the same through separate PPP arrangements or directly.

Risk Sharing: The responsibility for land, subsidy, and trunk infrastructure will be taken by the public authorities while the performance responsibility will be transferred on the private sector.

Bid Parameter: The private developer can again be selected based on the annuity amount – the bidder quoting the lowest annuity amount would be preferred.

Table 4: Matrix: Model 4

Risks	Risk Allocation			
	Government	Private	Financial	Beneficiary
Land				
Design				
Construction				
Maintenance				
Financing				



Cost Recovery				
Off-take				
Trunk-Infrastructure				
Credit Risk				

Model 5: Direct Relationship Ownership Housing

Model Description:

The essential difference between this Model and Model 1 is that in this model there will be a direct financial relationship between the Developer and the Allottee. The land will be allotted by the government and will constitute a significant subsidy. However, the Allottees would be required to make payments towards the cost of the housing unit directly to the Developer.

Salient Features:

Land as Subsidy: Under this model, land will be provided by public authorities on a long-term lease (preferably on a nominal lease rental) to the selected private developer co-terminus with the agreement period.

Preparation of technical guidelines by Public Authority: The public authority shall prepare technical guidelines for the purpose of project implementation.

Design Build & Finance by Private Sector: The private sector will be responsible and held accountable for designing, building and financing of affordable housing stock.

Maintenance by the Private Developer: The private developer is held accountable not only for the construction but for the medium to long-term maintenance.

Cost Recovery by Private Sector Partner: The private developer shall undertake to recover the cost of affordable housing directly from allottee. This recovery may take the form of a lump-sum payment at the time of transfer of housing unit to allottee or in the form of equated monthly installment.

Beneficiary Identification by Public Authorities: The establishment of the eligibility of beneficiaries will be the duty and the prerogative of the government.

Distribution: The housing stock will be transferred by the private sector to the individual allottees nominated by the government.

Payments by Allottees: The allottees would be required to make payment of a pre-determined



amount for the cost of the housing unit at the time of handover.

Public Private Partnerships for Trunk Infrastructure: The responsibility for the trunk infrastructure and connectivity will be borne by the public sector. However, the government could undertake the financing and implementation of the same through separate PPP arrangements or directly.

Risk Sharing: In this way the responsibility for land, subsidy, and trunk infrastructure will be taken by the public authorities while the performance responsibility will be transferred on the private sector.

Bid Parameter: The private developers can be selected based on per-unit-cost. The per-unit-cost will in turn be in the form of the monthly payment (EMI) that the Developer will be allowed to recover from the Allottees.

Table 5: Matrix: Model 5

Risks	Risk Allocation			
	Government	Private	Financial	Beneficiary
Land	Yellow			
Design		Yellow		
Construction		Yellow		
Maintenance		Yellow		
Financing		Yellow		
Cost Recovery		Yellow		Yellow
Trunk-Infrastructure	Yellow			
Credit Risk			Yellow	

Model 6: Direct Relationship Rental Housing

Model Description:

The essential difference between this Model and Model 5 is that in this model the Allottees would be required to make rental payments towards the usage of the housing unit directly to the developer, whereas these units continue to be owned by the developers. The type of units allowed



under this model. Thus, the private developer will undertake to recover the cost of affordable housing directly from allottee. The developer will also be responsible for the maintenance of the dwelling units for a pre-determined period.

Salient Features:

Land as Subsidy: Under this model, land will be provided by public authorities on a long-term lease (preferably on a nominal lease rental) to the selected private developer co-terminus with the agreement period.

Design Build & Finance by Private Sector: The private sector will be responsible and held accountable for designing, building and financing of affordable housing stock .

Maintenance by the Private Developer: The private developer is held accountable not only for the construction but for the medium to long-term maintenance of the housing units as well.

Cost Recovery by Private Sector Partner: The private developer will undertake to recover the cost of affordable housing directly from allottee. This recovery may take the form of a monthly payment for a fixed period of time.

Beneficiary Identification by Public Authorities: The establishment of the eligibility of beneficiaries will be the duty and the prerogative of the government.

Distribution: The housing stock will be transferred by the private sector to the government or to an agency or individual allottees nominated by the government.

Payments by Allottees: The allottees would be required to make monthly payment of a pre-determined amount to the private developer for a predetermined period of time.

Public Private Partnerships for Trunk Infrastructure: The responsibility for the trunk infrastructure and connectivity will be borne by the public sector. However, the government could undertake the financing and implementation.

Risk Sharing: In this way the responsibility for land, subsidy, and trunk infrastructure will be taken by the public authorities while the performance responsibility will be transferred on the private sector.

Bid Parameter: The private developers can be selected based on per-unit-cost. The per-unit-cost will in turn be in the form of the monthly rental payment that the Developer will be allowed to recover from the Allottees.



Table 6: Model 6

Risks	Risk Allocation			
	Government	Private Developers	Financial Institution	Beneficiary
Land				
Design				
Construction				
Maintenance				
Financing				
Cost Recovery				
Off-take				
Trunk-Infrastructure				
Credit Risk	Not applicable			

Comparative analysis across PPP models for affordable housing/Slum

Comparative Analysis based on scope of work:



Parameters	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Designing and Building of units	Private partner	Private partner	Private partner	Private partner	Private partner	Private partner
Maintenance of units	Beneficiaries	Beneficiaries	Private partner	Private partner	Private partner	Private partner
Distribution of units	Private partner to Public authority	Private partner to Public authority	Private partner to Public authority	Private partner to Public authority	Private partner to beneficiaries	Private partner to beneficiaries
Development mix	Affordable housing	Affordable housing & high-end housing/ commercial development	Affordable housing	Affordable housing	Affordable housing	Affordable housing
Responsibility of trunk infrastructure	Public authority	Public authority	Public authority	Public authority	Public authority	Public authority
Implementation of Trunk infrastructure	Separate EPC or PPP arrangement	Separate EPC or PPP arrangement	Separate EPC or PPP arrangement	Separate EPC or PPP arrangement	Separate EPC or PPP arrangement	Separate EPC or PPP arrangement

Comparative Analysis based on Project Structure:

Parameters	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Land provision	Public authority (on long term lease)	Public authority (on long term lease)	Public authority (on long term lease)	Public authority (on long term lease)	Public authority (on long term lease)	Public authority (on long term lease)
Lease period	~ 30 to 99 years for affordable housing	~ 30 to 99 years for affordable housing and commercial component	~ 30 to 99 years for affordable housing	~30 to 99 years for affordable housing	~ 30 to 99 years for affordable housing	~30 to 99 years for affordable housing
Contract period from conditions precedent	2 to 4 years	2 to 4 years	15-20 years	15-20 years	15-20 years	15-20 years
Bid parameter	Per unit cost (lowest lump-sum amount)	No. of affordable units to be provided on given plot	Per unit cost (lowest annuity payment)	Lowest annuity amount or lowest upfront grant	Per unit cost (lowest EMI or lowest lumpsum)	Per unit cost (lowest Rent)
Offtake responsibility	Public authority	Public authority	Public authority	Public authority	Private partner	Private partner
Performance Risk	Private partner	Private partner	Private partner	Private partner	Private partner	Private partner

Comparative Analysis based on Financing arrangements:



Parameters	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Financing	Private partner	Private partner	Private partner	Public authority and Private partner	Private partner	Private partner
Recovery by developer	Govt. pays private partner lump sum amount on completion	Revenue generated from high-end housing	Govt. pays long-term annuity to private partner on completion	Govt. pays upfront grant and annuity to private partner	Beneficiaries pay (Lump-sum or EMI) to Private partner	Beneficiaries pay monthly rent to Private partner
Support/subsidy for developer	Land	Land	Land	Land	Land	Land
Cross subsidy for developer	Not Applicable	Land provided for high end housing	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Offtake related Performance bonus for developer	10%-15% performance bonus linked to the no of units sold	10%-15% performance bonus linked to the no of units sold	10%-15% performance bonus linked to the no of units sold	10%-15% performance bonus linked to the no of units sold	Not Applicable	Not Applicable

Comparative Analysis based on Beneficiary Criteria:

Parameters	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Beneficiary eligibility	Public authority	Public authority	Public authority	Public authority	Public authority	Public authority
Beneficiary identification	Public authority	Public authority	Public authority	Public authority	Private partner	Private partner
Payments by beneficiaries	Lump-sum or EMI to Public authority	Lump-sum or EMI to Public authority	Lump-sum or EMI to Public authority	Lump-sum or EMI to Public authority	Lump-sum or EMI to Private partner	Rent to Private partner
Sourcing of funds by beneficiaries	Financial Institutions/ Monthly income	Financial Institutions/ Monthly income	Financial Institutions/ Monthly income	Financial Institutions/ Monthly income	Financial Institutions/ Monthly income	Monthly income

Models involving Private Land with Governments partnership

Each of the above models can also potentially be implemented on land that is privately owned instead of being publicly owned. In variations involving private land the total private cost of affordable housing will naturally increase substantially. In order that such projects involving private land are to be successfully executed, either the government will have to provide financial support to offset the high cost of private land or the degree of cross subsidy from high-end housing will need to be increased.



Model A: Taking advantage of CLSS (Credit Linked Subsidy Scheme)

1. Model Description:

Under this model, private developer will provide land as well as be responsible and accountable for designing, building and financing of affordable housing stock and associated services of predetermined standards, at a pre-determined cost and within a pre-determined time. The private developer will undertake steps to compensate it for the costs involved in satisfactory completion of housing stock and handing over of the units.

The establishment of the eligibility of beneficiaries will be the duty of the Banks extending the loans to the applicant. The selection of the allottees from amongst the eligible beneficiaries, in case of over subscription, shall be made in a transparent and equitable manner. It is also proposed that the Public Authority may congregate the beneficiaries, banks and builders in order to facilitate the selection of allottees. The private developer shall transfer the housing stock directly to the beneficiaries and the maintenance of the units is the sole responsibility of the allottees. The concerned public authority dealing with project approvals will ensure the timely provision of trunk infrastructure.

Salient Features:

a) Land Allotment and other exemptions:

Under this model, private developer shall provide land. The Public Authority may grant subsidies, exemptions and concessions such as State subsidy, stamp duty exemption.

b) Design, Build & Finance by Private Sector:

The private sector shall be responsible and held accountable for designing, building and financing of affordable housing stock.

c) Maintenance by the Private Developer:

There is no involvement of private sector and government for the maintenance of the units after the transfer of units to allottee. Maintenance, therefore, is the responsibility of the beneficiaries.

d) Cost Recovery by Private Sector Partner:

The private developer shall undertake to recover the cost of affordable housing directly from allottee.

e) Beneficiary Identification by Public authorities:



The banks extending loans to the applicants will establish the eligibility of beneficiaries.

f) Distribution:

The housing stock shall be transferred by the private sector directly to the beneficiaries.

g) Payments by Allottees:

The allottees would be required to make payment of a pre-determined amount for the cost of the housing unit at the time of handover.

h) Financial Assistance to Allottees:

Beneficiaries of Economically Weaker and Low Income Group seeking housing loans from Banks, Housing Finance Companies and other such institutions would be eligible for an interest subsidy at the low rate for a tenure of 20 years or during tenure of loan whichever is lower.

i) Public Private Partnerships for Trunk Infrastructure:

The responsibility for the timely provision of trunk infrastructure and connectivity shall be borne by the public sector.

j) Risk Sharing:

In this way the responsibility for subsidy and trunk infrastructure shall be taken by the public authorities while the land delivery and performance responsibility shall be transferred on the private sector. Financial institutions shall take the credit risk of financing the allottee.

Table: Matrix of Model-A (Taking advantage of CLSS)

Risks	Risk Allocation			
	Government	Private Developers	Financial Institution	Beneficiary
Land				
Design				
Construction				
Maintenance				
Financing				
Cost Recovery				
Off-take				



Trunk-Infrastructure				
Credit Risk				

Model B: Private Land Based Models under AHP (Affordable Housing in Partnership) scheme

Model Description:

Under this model, private developer shall provide land as well as be responsible and accountable for designing, building and financing of affordable housing stock and associated services of predetermined standards, at a pre-determined cost and within a pre-determined time. The private developer shall take actions to recover the costs involved in satisfactory completion of housing stock and handing over of the units as per prescribed standards. The establishment of the eligibility of beneficiaries shall be the duty and the prerogative of the public authority. An affordable housing project can be a mix of houses for different income categories. Taxation benefits can also be made available.

Salient Features:

a. Land Allotment and Other Exemptions:

Under this model, private developer shall provide land. The Public Authority may grant other subsidies, exemptions and concessions such as state subsidy, stamp duty exemption to incentivize the private developer for building affordable housing units.

b. Design Build & Finance by Private Sector:

The private sector shall be responsible and held accountable for designing, building and financing of affordable housing stock.

c. Fixing of Sale price of Dwelling Unit:

The projects may be fixed, either on the project basis or city basis, through an open transparent process factoring in incentives.

d. Maintenance by the Private Developer:

There is no involvement of private sector and government for the maintenance of the units after the transfer of units to allottee.

e. Cost Recovery by Private Sector Partner:

The private developer shall undertake to recover the cost of affordable housing directly from allottee. This recovery may take the form of a lump-sum payment at the time of transfer of housing unit to allottee.



f. **Beneficiary Identification by Public Authorities:**

For selection of beneficiaries, it states that allotment of houses to identified eligible projects should be made, following a transparent procedure .Public authority shall make the selection of the allottees from amongst the eligible beneficiaries, in a transparent and equitable manner.

g. **Distribution:**

The housing stock shall be transferred by the private sector directly to the beneficiaries.

h. **Payments by Allottees:**

The allottees would be required to make payment of a pre-determined amount for the cost of the housing unit at the time of handover.

i. **Public Private Partnerships for Trunk Infa:**

The responsibility for the timely provision of trunk infrastructure and connectivity shall be borne by the public sector. The government could undertake the financing and implementation of the same through separate PPP arrangements of revenue sharing or directly.

j. **Risk Sharing:**

In this way the responsibility for subsidy and trunk infrastructure shall be taken by the public authorities while the land delivery and performance responsibility shall be transferred on the private sector. Financial institutions shall take the credit risk of financing the allottee with a housing loan – public or private.

Table: Matrix of Model B

Risks	Risk Allocation			
	Government	Private Developers	Financial Institution	Beneficiary
Land				
Design				
Construction				
Maintenance				
Financing				



Cost Recovery				
Off-take				
Trunk-Infrastructure				
Credit Risk				

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