

**ANDHRA PRADESH**  
India's Sunrise State

# Adapting Hybrid Annuity Model for Projects in Andhra Pradesh

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**ANDHRA PRADESH URBAN INFRASTRUCTURE  
ASSET MANAGEMENT LIMITED**

(A Joint Venture of Govt. of A.P. and IL&FS Group)

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# Public Private Partnership

- ❖ **Public Private Partnership (PPP)** as the name indicates is an arrangement between government and private sector to design, build, finance, own and or operate projects, typically of a long-term nature
- ❖ In India, PPP has been employed primarily for infrastructure projects such as highways, airports, sea-ports, water supply, etc.
- ❖ There are different types of PPP structures:

|                                     |  |
|-------------------------------------|--|
| Built-Operate-Transfer (BOT)        | Developer builds the asset, operates it for a specified duration and transfers it back to the government. Payment is made to developer for the duration of operation of the asset by developer |
| BOT – toll model                    | Same as BOT however, developer is allowed to recover their investment through collection of toll revenue for long periods ~30 years. Applicable primarily in highway projects                  |
| Engineering-Procure-Construct (EPC) | Government is responsible for payments for construction and procurement. Private player participation is limited to engineering expertise and construction of the project                      |
| <b>Hybrid Annuity Model (HAM)</b>   | <b>Government pays 40% of the cost of the project during construction period and rest 60% of the payment as Annuities along with interest over the operation period</b>                        |

# Hybrid Annuity Model – combination of EPC and Annuity model

## HAM Launch

- ❖ NHAI, a pioneer in executing PPP projects in India, has moved awarding contracts from rate contract to annuity to BOT toll to EPC to HAM model
- ❖ In 2016-17, NHAI has awarded 38 contracts on EPC, 35 contracts on HAM, and 4 on BOT
- ❖ In case of HAM model, the risks are distributed between government agency and concessionaire as opposed to risks primarily lying with concessionaire in BOT model

## Risks

| Risk category              | Govt. | Concessionaire |   |
|----------------------------|-------|----------------|---|
| Pre-Construction Clearance | ●     |                | Environment, ROW, Forest clearances               |
| Construction               |       | ●              | Cost Overrun, Time Overrun, Quality risk          |
| Financing                  | ○     | ○              | Financial closure on time, Financing cost overrun |
| Operations & Maintenance   |       | ●              | Major and routine maintenance                     |
| Change in Project Scope    | ●     |                | Deviations from DPR scope                         |
| Input Material Cost        |       | ●              | Material cost fluctuation risk                    |

# Hybrid Annuity Model versus PPP

## Private Capital

- ❖ HAM models enable influx of private capital for the infrastructure development and helps in diversifying financing sources
- ❖ Liquidity of developer is ensured

## Lifecycle cost

- ❖ HAM developer is incentivized to take a lifecycle view to reduce O&M costs in future. This will result in longer life of asset

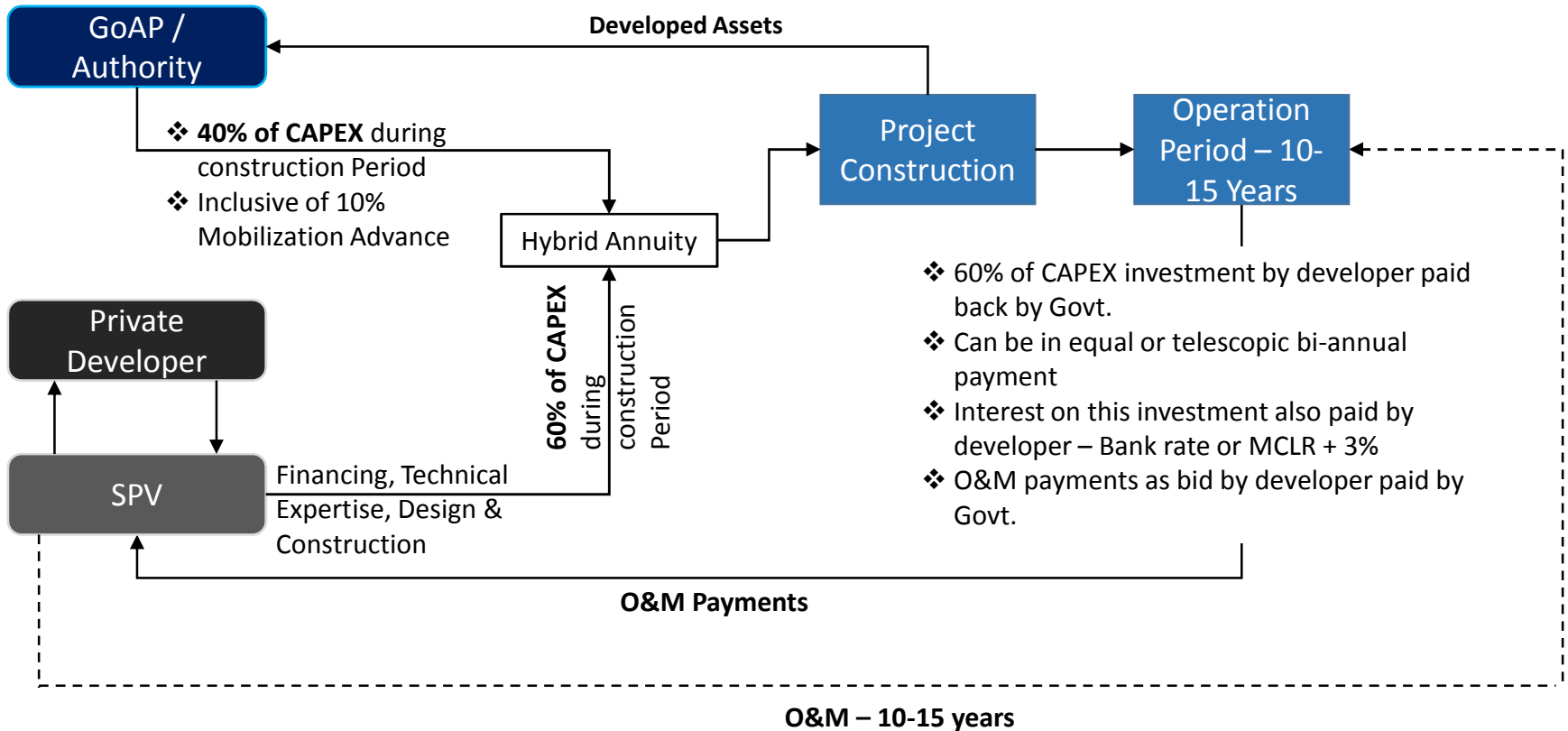
## Fewer Project delays

- ❖ EPC projects in India have a construction delay of 47 months as against 19 months for PPP. This results in escalation in construction cost for EPC projects by 24%
- ❖ Many PPP projects have been stalled owing to non-availability of finances adding to NPAs of banks

## Cost of capital

- ❖ Cost of capital is comparable based on NHAI bid analysis
- ❖ HAM will lead to staggering of cash flows for Authority

# Hybrid Annuity Model – Structure Overview



## Hybrid Annuity Model – Projects Undertaken

- ❖ 43 highway projects with estimated cost of Rs.3,600 Cr have been awarded on the HAM by NHA
- ❖ State Governments of Maharashtra, Rajasthan, Jharkhand, and Karnataka have executed projects on HAM model

### Karnataka Govt.

- ❖ Karnataka State Highways Improvement Project (K-SHIP) has executed two road projects on annuity basis (supported by World Bank)
- ❖ Project details:
  - Upgradation of the 194 kms road from Malavalli to Pavagada
  - Construction cost of Rs. 559 Cr+ Rs. 1306 Cr annuity cost to be paid in semi-annual installments
  - Concession period of 10 years: 30 months construction and 90 months maintenance

### Namami Gange

- ❖ The Ministry of Water Resources, River Development & Ganga Rejuvenation has also adopted Hybrid Annuity Model for Namami Gange program to build Sewage Treatment Plants (STP)
- ❖ 3 STPs in Haridwar and 1 STP in Varnasi were awarded
  - Concession period of ~17 years: 21 months construction and 180 months maintenance

**GoAP is adapting HAM for various integrated projects planned across the State**

- ❖ **GoAP** is planning multiple infrastructure projects across the state of Andhra Pradesh
- ❖ Large quantum of investment required by GoAP for implementing these projects
- ❖ Private sector in recent past has been unable to provide wholly for such high investment project
- ❖ Number of PPP (BOT, BOT-Toll) projects have been stalled owing to unavailability of financing
- ❖ HAM distributes financing risks between government and private player and hence is becoming preferred choice for developers, banking institutions and government alike among all other PPP models
- ❖ **HAM is one of the potential solution and should be explored for certain projects across the State and as an alternative to the EPC model**