

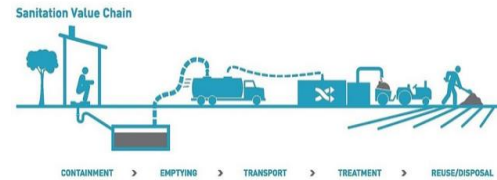


Towards ODF ++ Telangana

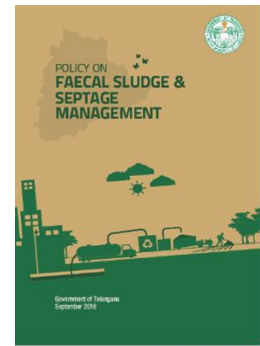
Setting Benchmarks in Faecal Sludge & Septage Management

Public Private Partnership for Establishing and Operating Faecal Sludge Treatment Plants (FSTPs) in 71 Municipalities

The Municipal Administration and Urban Development Department (MA&UD), Government of Telangana has prioritized sanitation and achieved Open Defecation Free (ODF) urban areas by universalising access and usage of toilets.



In line with the vision of Swachh Telangana, MA&UD envisioned to achieve ODF++ status in all the Urban Local Bodies (ULBs) through Faecal Sludge and Septage Management (FSSM). Towards this, a policy and operative guidelines for FSSM was notified (GO 176) on September 29, 2018. The policy is introduced to regulate provision of toilets, safe collection, treatment and disposal/reuse of faecal waste in urban areas of Telangana. **The GO 176 mandates every ULB to scientifically treat and dispose faecal sludge and septage by establishing Faecal Sludge Treatment Plant (FSTP).**



The Commissioner & Directorate of Municipal Administration (CDMA) piloted three FSTPs using different technologies in the towns of Warangal and Sircilla. While one of the projects involves thermal treatment of faecal waste using pyrolysis technology, the other uses geobag based system and the third plant is based on biological treatment processes. With the support of Administrative Staff College of India (ASCI), the CDMA developed a scale-up plan and prepared techno-economic studies (DPRs) and ascertained funding requirement for establishing and operating FSTPs in the state. An innovative approach of **Public Private Partnership (PPP) was introduced for developing FSTPs in 71 ULBs on Design, Build, Operate & Transfer (DBOT) basis. Hybrid Annuity Model (HAM) of PPP with a ten-year operations and maintenance (O&M) contract was considered as the most appropriate mode of procurement.**



To attract operators of repute, promote state-of-the-art treatment technologies and to achieve economies of scale, Government clustered 71 plants into seven packages. Bids were invited for each package. Construction of FSTPs are initiated and all the 71 ULBs are on the way to achieve ODF ++.

The PPP engagement for establishing FSTPs using HAM in Telangana is a first of its kind initiative in the world and has significant potential for replication

Key Features of HAM for FSTP development in Telangana

- A two-stage procurement process is adopted - EOI followed by a detailed RFP covering technical and financial components. QCBS system of procurement was followed. Cost benchmarks with key performance indicators are defined at the outset.
- Technology agnostic approach was considered during procurement and therefore, the bidder was free to employ well established technology options for establishing FSTPs. Technologies which are appropriate, environmentally friendly and low on land footprint and O & M cost were preferred. A technology evaluation committee validated the proposals and undertook necessary due diligence.
- The technical and financial bids of the bidders are evaluated using Least Cost Selection (LCS) process. The bids are evaluated based on lowest assessed Bid Price (the "Bid Price"). The Bid Price is the summation of (a) Bid Project Cost and (b) Net Present Value (NPV) of O & M Cost (the "O & M Cost) during the O & M Period. The bidder quoting the lowest price considering capex (capital expenditure) and opex (operational expenditure – O&M) for ten years is considered.
- The Concession Period is set for 10 years which includes Project Construction and O&M period.
- Third party technical agencies (Independent Engineers) are appointed for regular technical scrutiny with payments being performance linked.
- Under the HAM model, the state government pays 60% of the capital cost of project during the six months construction period and the remaining 40% is paid on an annuity basis along with O&M charges in equal quarterly installments over a period of 9.5 years.
- The concessionaires are responsible for construction, operation and maintenance of the FSTPs at the sites being provided by the ULBs and in conformity with the specifications and standards.
- The concessionaires are responsible for effective treatment and safe disposal of faecal sludge and septage as per the PCB norms. They must comply with the environmental and all other regulatory norms that are in vogue from time to time during the entire concession period.
- The concessionaires are allowed to monetize resources recovered like biogas, treated wastewater, biochar, compost. Low energy usage option was encouraged.
- ULBs are required to ensure availability of land on lease (~0.5 to 1 acre) for establishing FSTPs. A permanent approach road for trucks to decant septage at treatment plant is to be made available by the ULB. Further, ULB is to facilitate access to water and power for O&M of FSTP.
- ULBs are required to regulate desludging operators and direct them to deliver faecal sludge at the project site for treatment.

Advantages of PPP-Hybrid Annuity Model (HAM) for FSTP development

- ✓ The model enables influx of private capital for the infrastructure development and helps in mitigating risk related to capital investment through a risk sharing approach.
- ✓ Unlike typical PPP projects, 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 developer is incentivized to take lifecycle view to reduce O & M costs in future. This will result in longer life of asset.
- ✓ HAM projects are less prone to delay vis a vis EPC projects due to availability of capital
- ✓ HAM will lead to staggered cash flows for the Government.