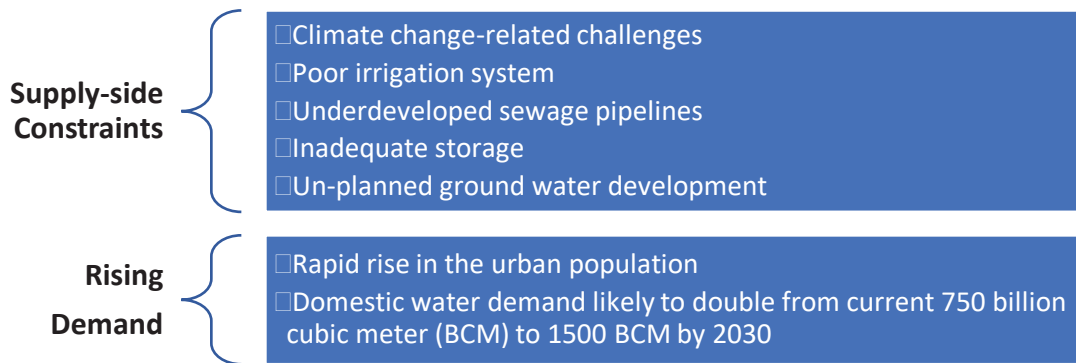




# STP HAMs: Bridging India's water crisis

**D**espite accounting for 17% of the worldwide population, India has access only to a meagre 4% of the global freshwater resources. The demand–supply gap for freshwater is steadily widening, with the demand outpacing the supply. The graphical representation highlighting the underlying factors contributing to the deficit is given below:

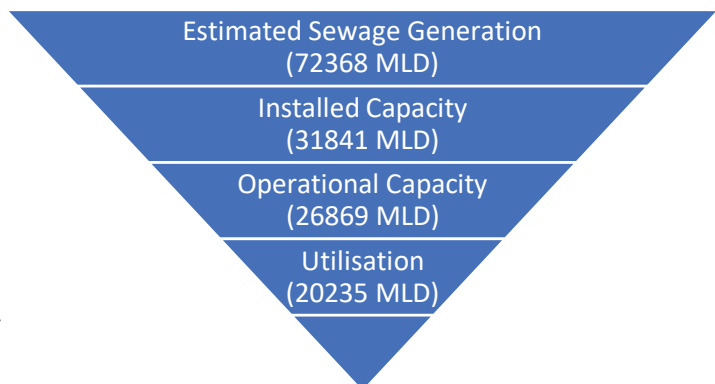


Source: Central Pollution Control Board (CPCB), CareEdge

## Inadequate sewage treatment capacity leading to water pollution

In India, approximately 80% of the water supplied for domestic purposes is converted into sewage after consumption. Furthermore, only 30% of the water released into rivers is treated water.

As per the March 2021 report by CPCB, sewage generation in the urban centres of India is estimated at 72,368 million litres per day (MLD) across 35 states and union territories (UT). Considering the installed capacity, there is a gap of 40,527 MLD in the sewage treatment capacity. The capacity utilisation of operational capacity stood at 75%.



Source: CPCB, NITI Ayog, CareEdge

## Thrust of GoI on STPs

Realising the substantial gap in the sewage generation and treatment capacity along with the intent to clean the major rivers, the Government of India (GOI) launched the Namami Gange programme in 2015. The main thrust of this programme was to develop sewage treatment plants (STPs) with an aggregate outlay of ₹25,000 crore. Moreover, National Infrastructure Pipeline (NIP) also entrusts on STPs with massive allocation of ₹80,000 crore for sewage collection, treatment and disposal projects from financial year (FY) ended March 2020 to March 2025. This entails robust revenue visibility for the engineering, procurement and construction (EPC) contractors in the medium term.

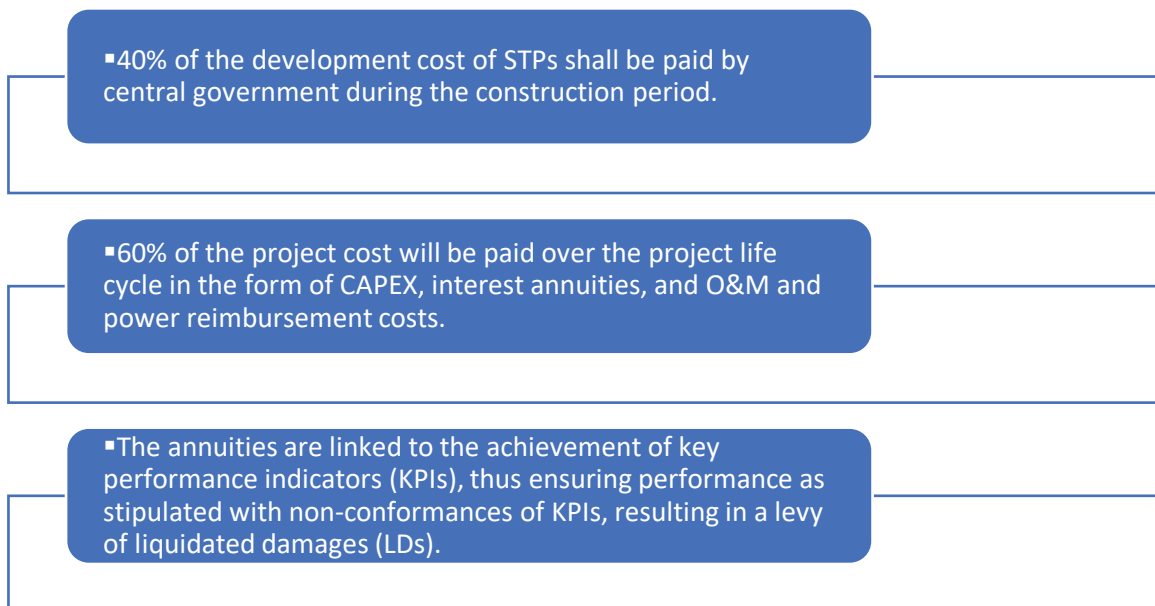
CareEdge expects incremental order inflow of around ₹28,000-₹30,000 crore during FY23-FY25 for new STP capacity additions over and above rehabilitation of the existing STPs.

Source: NMCG portal, NIP portal, CareEdge

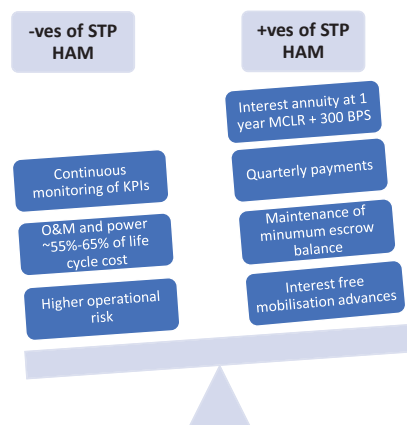
## Introduction of hybrid annuity model for STPs

To offer a sustainable and viable solution for STPs and increase the traction towards the same, GoI has approved a public-private partnership (PPP)-based hybrid annuity model (HAM) for STPs.

The key features of the HAM STPs are as follows :



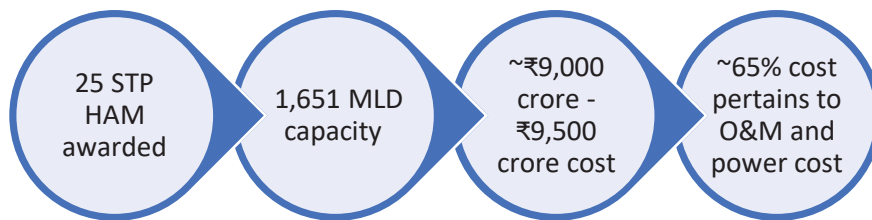
The 40:60 model of STP HAM is almost similar to the existing road HAM models. However, in some aspects, STP HAM ranks superior to road HAM and vice versa. The comparison of the merits and demerits of STP HAM vis-à-vis road HAM is presented below:





While the road HAM model has gained acceptance and maturity, which can be witnessed through traction in pace of awards since 2016, only a handful of the projects have been awarded under STP HAM projects.

As on July 31, 2022, National Mission for Clean Ganga (NMCG) under the NamamiGange programme has awarded 25 projects for developing new STPs and rehabilitating older STPs with a cumulative capacity of 1,651 MLD under the HAM model.



Source: NMCG portal, CareEdge

### Conclusion:

Accelerating the pace of construction of STPs, while improving their operating efficiency is critical for bridging India's water crisis. Given the sizeable untreated capacity and thrust on STP construction, CareEdge expects a sizeable investment of around ₹28,000 crore-₹30,000 crore over FY23-FY25 in the construction of new STPs over and above the potential of rehabilitation capex. Attracting private investment through HAM is a welcome move by the GoI for the sustained development of STPs. Budgetary allocation of funds for annuity payments by the central government, quarterly annuity payout linked to benchmark lending rates of banks and availability of interest-free mobilisation advances are key positives for the STP HAMs. Nevertheless, the developer's ability to maintain KPIs while keeping O&M and

power cost within the permitted range on a sustained basis shall be the key challenge from credit perspective. Timely handover of land along with design approvals, pace of achievement of financial closure and establishment of track record of timely release of payments from the authority shall pave the way for the success of the STP HAMs. EPCWorld



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