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BWSSB to generate power using sewage water

For the first time in the State, sewage water will be used for power generation at the Koramangala and Chalaghatta valley in the City.

The ambitious project taken up by the Bangalore Water Supply and Sewerage Board (BWSSB) is expected to generate 1.05 kilo watt (kW) of power that will be used to run the 60 mld (million litres of water per day) sewage treatment plant (STP) at the same location.

The project taken up under the Japan International Cooperation Agency (JICA) at a cost of Rs 222 crores, including operation and maintenance, is expected to be ready by June 2015.

Using unique technology, the activated sludge process will be generating power by the methane gas generated by sewage.

Though the STP will be a secondary treatment plant, the technology will include Biological Nutrient Removal (BNR), a process where nitrogen and phosphorus is removed from the waste water before it is discharged.

According to a BWSSB official, the BNR is a good enough for

all non-potable purposes and the Board intends to supply the treated water to the near by industries in future.
The STP technology will also have the provisions of treating the water at tertiary level in case the water is required for further use, the official added.

New pipelines

The sewage for the proposed STP is expected to be drawn from Sarakki (20 mld) and Agaram (60 mld) where the pipelines will be integrated with the Karnataka Municipal Reforms Project (KMRP) where in the sanitary pipelines are being laid for the first time at many locations.

Waste water from nearly 40,000 houses on Bannerghatta Road will be directed to Sarakki Intermediate Sewerage Pumping Stations (ISPS) from where the water will be pumped through 700 mm dia pipeline for nearly three kilometers. Later, with the existing KMRP 2000 mm dia pipeline running four kilometers will reach Agaram.

From Agaram ISPS, 60 mld will be sent to Koramangala and Chalaghatta (K&C) valley and another 60 mld to the proposed STP at Bellandur Amanikere passing through 5.3 kms.

The BWSSB will have to lay fresh 1000 mm diameter pipelines in the Defence property near intermediate ring road for nearly three kilometers from Agaram ISPS to K&C valley.

The BWSSB had pursued to generate power through sewage

water in 1990s, but they were not able to succeed as they did not have the technology to hold methane gas for generation of power.

However, by 2000, sophisticated technology with advance components in STP plants had enabled the Board to take up the power generation project.

K&C valley already has 248 mld capacity STP plant which is one of the biggest and treats one-third of waste water generated in the City.

However, at present the STP is treating just around 215 mld per day and treated water is being let out to into the Bellandur Lake.