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Plant to process waste, make biogas

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THIRUVANANTHAPURAM: The City Corporation is entering into an agreement with the National Institute for Interdisciplinary Science and Technology (NIIST) to establish a pilot plant for solid waste management. The Corporation Council on Friday approved the draft of the Memorandum of Understanding.

The plant will be able to process five tonnes of garbage daily. Its primary component is an anaerobic composter that can produce biogas out of easily-putrefying garbage.

While the Corporation will provide land, electricity, water, solid waste and unskilled labour for the plant, the NIIST will foot the capital cost and the operation and maintenance expenses for three years.

The project is expected to supplement the existing solid waste management system. It is estimated to cost Rs.1.76 crore. The Ministry will provide Rs.1.22 crore. The rest will be borne by the Corporation.

The project will be transferred to the local body after three years but NIIST will continue operational and R&D support for 10 years.

Lab test a success

The Department of Environmental Technology of the NIIST unit at Pappanamcode here has successfully tried out a laboratory version of the anaerobic digester. Scientists who worked on the project said the process was found to convert putrescible matter to biogas energy with more than 60 per cent methane content. They claim that the presence of non- biodegradable matter does not interfere with the process.

Easily putrefying waste is the most difficult to manage because of the smell and the leachate it generates. The scientists said they had come up with a zero-discharge system for the primary treatment process. The system uses a powerful microbial extraction process and a bio-filtration method to control the odour. One of the advantages of the digester is that it can handle unsorted garbage.

The project will come up with a system to utilise the huge amount of biogas to be generated by the plant. The secondary stage involves the development of appropriate technology to treat the residual waste.