



TTV – High solids anaerobic digestion from Thöni Augsburg (DE)

Customer

AVA Augsburg

Plant data

Commissioning: 2013 (phase one)
Commissioning: 2016 (phase two)

Input: 75,000 t/a biowaste, green waste



Plant and Process

On arrival at site, the input material is deposited in a flat bottom bunker. The biowaste together with the green waste then is transported to the pre-treatment unit (consisting of a shredder, a metal separation and a star screen) by means of a wheel loader. Afterwards the separated organic material is conveyed via belt conveyors to the storage tanks.

From there the biowaste goes into a mixing unit (dosing device) which assures the homogenization of the material. Thereafter, the substrate is fed by means of piston pumps into the digesters.

The 3 digesters are equipped with a single roof-top gas store to optimize the whole-site footprint. In the entirely closed digesters microorganisms transform the energy of the organic material under anaerobic conditions (=exclusion of oxygen) into biogas. The fermentation substrate remains for approx. 18 days in the heated digesters.

At the end of the digestion process the digestate is removed from the digesters and pumped to the screw presses where it is dewatered. Part of the liquids are recirculated in the digestion process and used for humidifying the fresh input material. The remaining part of the liquids is stored in tanks and used as fertilizer in agriculture. The solid part undergoes a further aerobic composting process in special composting units.

The biogas is processed into bio-methane in a biogas treatment plant and then fed into the local gas grid of Augsburg.

By integrating the combined AD and composting at the waste-to-energy plant at Augsburg this site becomes a benchmark for joined-up thinking about waste, recycling, energy, resources and the environment.

Performance

Input:
75,000 t/a biowaste, green waste

Output:
High quality fertilizer liquid:
17,600 t/a used in agriculture

High quality fertilizer solid:
15,900 t/a used in agriculture, horticulture and landscaping

Raw biogas:
8,000,000 m³/a

Bio-methane / gas grid:
46,000,000 kWh/a

Corresponding to
annual heating requirement of 5,000 households

or
annual power requirement of 6,000 households

or
CNG requirement of 5,000 cars (15,000 km/a)

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