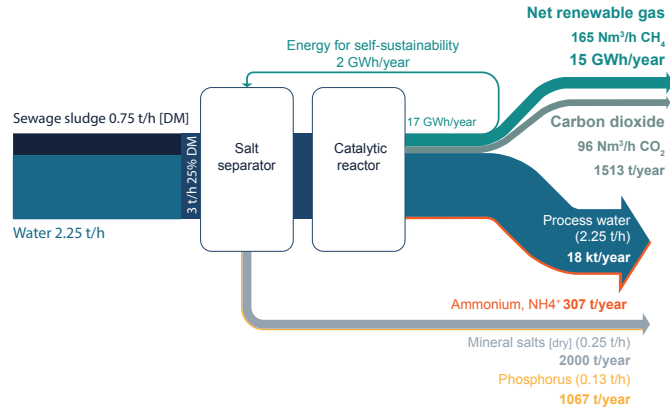
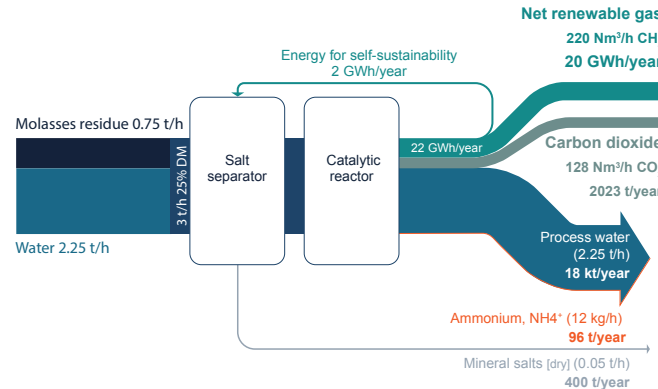


1. Municipal sector HTG unit of 3 t/h treating digested sludge (6'000 tDM/year)



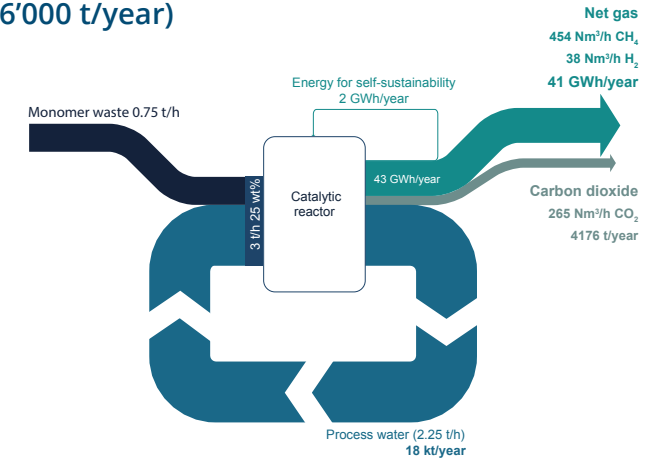
Mass and energy balance simulation for a plant treating 3 tons per hour of digested sewage sludge with our technology. The figures are based on the results obtained treating digested sewage sludge with our 1 kg/h prototype.

2. Food and beverage sector HTG unit of 3 t/h treating molasses residue (6'000 t/year)



Mass and energy balance simulation for a plant treating 3 tons per hour of molasses residue with our technology. The figures are based on the results obtained treating molasses residue with our 1 kg/h prototype.

3. Chemical sector HTG unit of 3 t/h treating monomer residue (6'000 t/year)



Mass and energy balance simulation for a plant treating 3 tons per hour of monomer waste with our technology. The figures are based on the results obtained treating monomer waste with our 1 kg/h prototype.

Municipal clients

Sewage sludge contains essential nutrients for agriculture and has traditionally been disposed of by spreading as fertilizer. The increasing concentration of heavy metals and micropollutants in sewage sludge and the urgent need for a transition to sustainable waste management has led to increasingly strict regulations concerning its disposal and the recovery of nutrients (phosphorus and nitrogen) from this waste. This has led to a trend shift towards incinerating sewage sludge.

However, this method results in the release of large amounts of CO₂, and wastes large volumes of water via non-recovered steam further exasperating clean water scarcity. In addition, the energy is generated in the form of heat which cannot be stored when produced off-season and neither transported over long distances. Compared to incineration, for 3 times less space, our solution is able to recycle up to 95% of the waste value; and it emits 94% less CO₂.

We have validated our technology with digested and undigested sewage sludge from several WWTPs in Switzerland and France.

Industrial clients

Chemical, pharmaceuticals, oil & gas, and food & beverage manufacturers increasingly seek to valorise their waste streams, incentivized by net zero initiatives as well as the need of renewable gas to fuel their process.

The robustness of our technology allows us to treat and fully valorise a wide range of wastes from various industrial sectors. Our solution, installed at the source of the waste in the industrial site, can convert 99% of the organics into pollutants-free methane-rich gas that can be injected on the grid or used on-site. Moreover, we can separate and recover the CO₂ from the gas produced as well as the water contained in the waste that is clean after our process and can be reused or safely discharged.

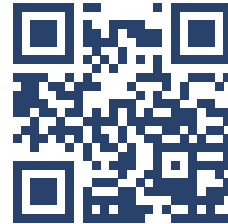
We have validated our technology with more than 10 different industrial feedstocks from clients in Europe and the USA including residues from monomer production, plastic residues, paint residues and molasses residues among others.

	1. Digested sludge	2. Molasses residue	3. Monomer residue
Lower heating value [MJ/kg]	13	19	29
Carbon recovery in gas [%]	75	86	94
Specific energy production [kWh/t]	2'784	3'716	7'096
Net methane production [Nm ³ /h]	165	220	454
Carbon dioxide production [Nm ³ /h]	96	128	265
Net energy production [GWh/year]	15	20	41
		1.5X MORE ENERGY THAN TREATING SLAGGE FOR SAME PLANT SIZE	3X MORE ENERGY THAN TREATING SLAGGE FOR SAME PLANT SIZE

Benchmark for a 3 t/h plant based on the results obtained in the laboratory prototype (1 kg/h) processing digested sludge, molasses residue and monomer residue.



Experimental Testing



Test campaigns are meant to evaluate the process parameters on a small scale of 1 kg/h and then on a scale of 100 kg/h. Based on the results, the process parameters can be estimated.

Test 1 kg/h Test 100 kg/h

Feedstock conditioning & chemical analysis	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
+ \GURWKHUPDO JDVL4FDWLRQ WHVW in a laboratory prototype (1 kg/h) or pilot plant (100 kg/h)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
\$QDO\VLV RI WKH H^XHQW SURGXFH	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
PDF report presentation via video conference	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
(YDOXDWLRQ RI WKH JDVL4FDWLRQ SDUDPHWHUV UHFYHU\ RI PLQHDO VDO\ TXDOL\ RI process water.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
& \$3(; 23(; FDOFXODWLRQ IRU SODQ\VLJH	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Face-to-face reporting within EMEA (expenses additional)	<input type="checkbox"/>	Optional