

Supplementary material: Table S1 and S2

Energy Balance of Turbocharged Engines Operating in a WWTP with Thermal Hydrolysis. Co-Digestion Provides the Full Plant Energy Demand

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Table S1. Heat capacity and specific enthalpy of the fluid flowing through the compressor, intercooler and turbine.

Point	C _p (kJ/kg*K)	*Specific enthalpy
Compressor		
0	1.004	0
1s	1.009	59.9
1	1.011	80
Intercooler		
2s	1.007	38.4
2	1.007	40.4
Turbine		
3	1.101	571.6
4s	1.080	462.2
4	1.085	489.2

*Reference temperature of specific enthalpy (25 °C)

Table S2. Energy parameters of compressor, intercooler and turbine.

Parameter	Mass flow (kg/h)	Compression or expansion ratio (w.u.)	Power (kW)	Losses (kW)	Percentage of losses (%)
Compressor	1,469.5	1.9	32.7	8.4	25.7
Intercooler	1,496.5	...	16.2	0.9	5.6
Turbine	1,469.5	1.5	33.7	*1.0/11.0	32.6

*Mechanical / thermal losses of the turbine