



RE Syngas

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RecyclingEnergy's thermal gasifier provides high energy recovery from any carbon based feedstock in the form of syngas.

The syngas is very clean and tar-free, low-carbon and low-oxides. Particles, furans and dioxins are hardly at all.

The produced syngas can be utilized in various ways for example to run burners, as fuel for gas motors, gas turbines etc. or it could be liquefied.

RE Syngas composition:

Hydrogen (H₂) 40-45 %

Carbon Monoxide (CO) 40-45 %

Methane (CH₄) 15-50 %

Carbon Dioxide (CO₂) 2-4 %

RE Syngas calorific value: approx. 13 MJ/kg, 3.611111 kWh/kg, 3.100 kcal/kg; approx. half of natural gas

RE Syngas

RE Syngas Utilization Example

RE Syngas can be utilized, for example to run burners, create electricity with a gas motor, gas turbine etc. or can be liquefied.

Additionally, the utilization of the available off-heat has naturally a positive effect on the energy balance of any project, which can up to double the output. The calculation examples shown below are not including the utilization of the off-heat which would greatly increase the results.

	Wood waste	Auto schredder residue (ASR)	Dried sewage sludge	Medical waste
Caloric value kcal/kg	3500	4000	3500	6000
Gas volume Nm ³ /ton	1050	1200	1050	1800
Electricity kWh/ton	1200	1300	1050	2000