

The background of the entire page is a grayscale photograph of industrial machinery. It features a complex network of stainless steel pipes, large cylindrical tanks, and various valves and electrical components. The machinery is arranged in a structured, grid-like fashion, typical of a chemical processing or pharmaceutical manufacturing plant. The lighting is even, highlighting the metallic textures and the precision of the equipment.

evolution

by PDI

**The clean technology completing
the loop of the circular economy**

About the company

PDI a.s. is a developer of innovative projects in the field of energy production from renewable sources, mainly focused on „Waste-to-energy“ projects.

Our know-how is based on a two-stage high-temperature technology producing gas replacing conventional fossil fuels.

We offer modern technology that can help You with your own company's energy needs and solve your waste management at the same time.

We are ready to develop a feasibility study for such a project for your consideration.

PDI, that's Progress, Dynamics and Innovation since 1999.

Together with you, we can close the loop of the circular economy.

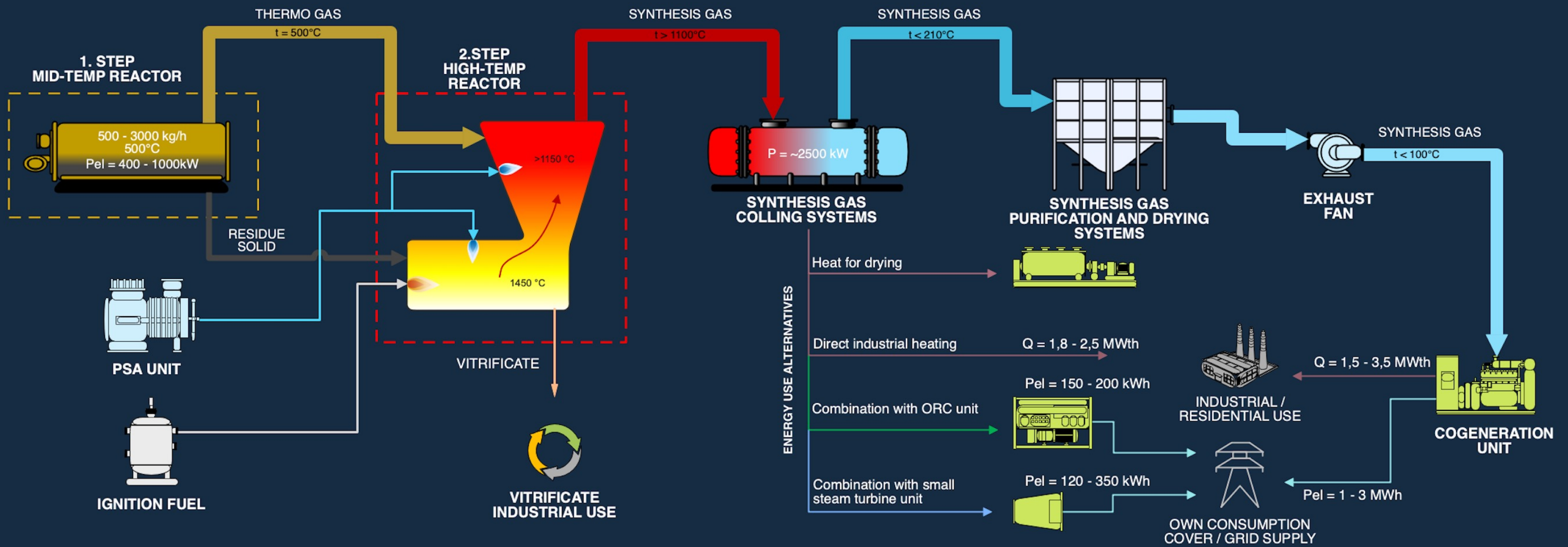
We offer innovative technology that enables energy production from waste.

We propose tailor-made solutions for forward - thinking individuals who seek to diversify their energy input.

Utilize the heat, electricity, or synthesis gas from your waste



evolution SYSTEM TECHNICAL SCHEME



Benefits

- ✓ We reduce your energy costs and increase the productivity of your business
- ✓ We solve the waste problem by utilizing it as a source of energy
- ✓ We are able to create an alternative to natural gas and contribute to climate protection
- ✓ We eliminate the generation of harmful emissions and help meet strict environmental requirements
- ✓ We provide an environmentally friendly and efficient source of energy from waste products
- ✓ We optimize waste disposal costs by processing hard-to-recycle materials
- ✓ Our technology enables sustainable and environmentally friendly energy production from unused waste, which helps reduce energy costs and protect the environment.



Synthetic gas, which is a substitute for natural gas.



Production of electric or thermal energy

H₂

Production of hydrogen, methanol, or other substances

Description of the process

1. Waste up to a size of 30 cm is filled into the reactor.
2. In the first stage of thermal decomposition of waste in the rotary reactor, raw syngas and solid residue are produced.
3. Both components proceed to the high-temperature reactor, where the further decomposition of substances takes place at temperatures exceeding 1400 °C, resulting in the formation of synthesis gas and vitrified residue.
4. The vitrified residue can be utilized in the industry, while the synthesis gas is purified and can serve as an alternative to natural gas.
5. The synthesis gas can be used in gas boilers and for cogeneration of heat and electricity.
6. The synthesis gas can be further processed into other raw materials for fuel production.
7. The electrical energy can be supplied to the grid or partially used for self-consumption.

Up to 3 t/h

Processed material

Up to 8 000 h

Annual operation

Up to 24 000 t

Annual capacity

Savings up to 6m. €/ year

At a price of 50 EUR per MWh.

Let's work together to improve the environment of our planet

**Waste
efficiently
processed**

disposal

**own
production
of gas**

**Energy
costs**

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