

**RET-D5 Technology Installation is the ecologic and economic solution for utilization of the mixed, energy content fraction of the municipal, industrial and medical waste, sewage sludge and coal mud/dust; solution for cutting the cost of the waste utilization.**

**NOTICE: PL-US Team is not selling RET-D5 Installations and will not try to convince to buy it – we are looking for Partners (municipalities, municipal & private companies) to develop, build and operate RET-D5 Installations using the funds from Investors and environmental programs in the USA, UE and Poland.**

**RET-D5 Installation purely transforms waste in the into the eco- synthetic gas (SynGasRET) and then into the eco-fuels (Methanol, DME) or to the eco-energy (electricity/heat/chill).**

**RET-D5 Technology** (known as a D4 Technology before) was invented by Mr. Ronald Baker, PhD Eng. (scientist & practitioner who works for Michelin and NASA at the field of waste utilization and fuel/energy generation), and is offered by Ron Baker engineering consultancy **Reform Earth Technologies, Inc. (RET)** from the USA. **RET-D5 Technology** in the scientific language is an "anaerobic/non-oxygen (no-burning or glowing), high temperature (>850 C. and more), catalytic Degasification/Devolatilization process of turning waste to SynGas. **RET-D5 Technology is highly ecological** (near-zero emissions and residue), **highly effective technologically** (~50 tons/day) and **highly economic** (very good ROI & IRR). **RET-D5 Installation** is the most innovative alternative to the waste Incineration or Gasification Installations.

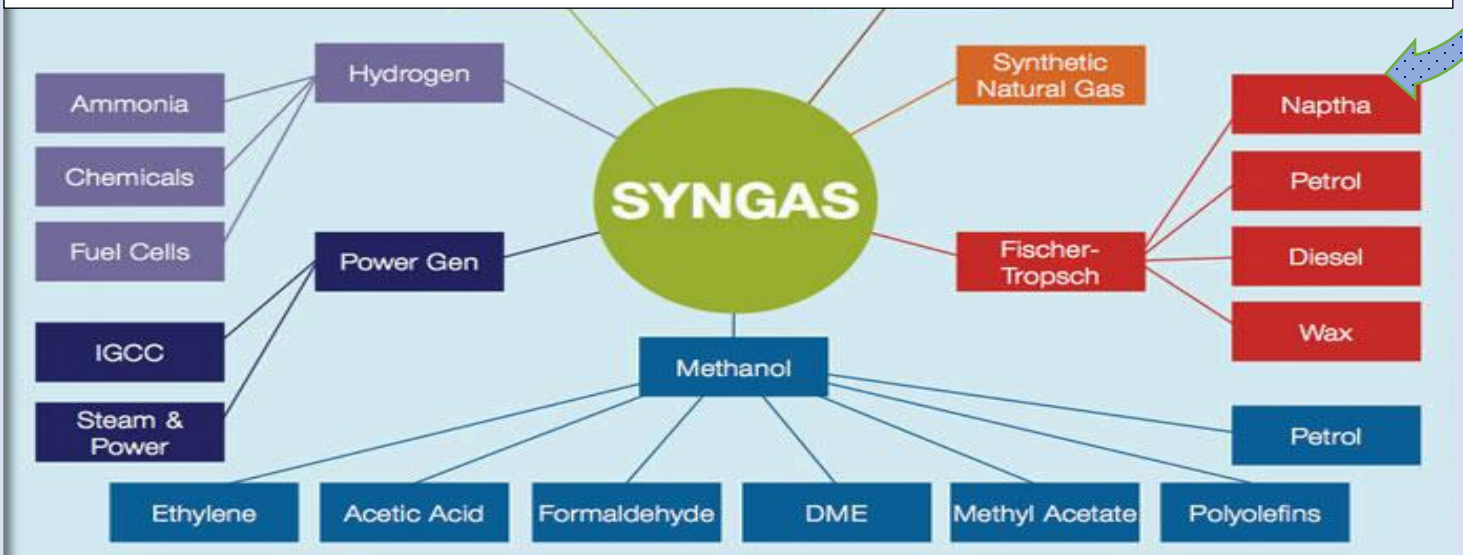
**Municipal mixed organic waste... and/or sewage sludge... and/or coal, coal-culm/mud...**  
*(RET-D5 Installation can accept any moisture level of the feedstock)*



**...goes to RET-D5 Installation – below see the pictures of the main RET-D5 Installation Modules, from the left: Module I.: Feedstock Preparation; Module II.: Reactor for SynGas generation; Module III.: SynGas Enhancement**



**Below – Module IV.: RET Installation products from SynGas:**  
*(RET-D5 Installation innovative character: ability of the SynGas generation from the waste feedstock with revenue „at the gate” for waste utilization and from the sale of the RET-D5 Installation products.)*



## **RET-D5 Technology Installation (RET-D5 Installation)...**

**...it is highly innovative and highly effective (ecologically/technologically/economically) Installation that is BEST SOLUTION for the local governments, municipalities and private companies for the waste utilization.**

**RET-D5 Installation** can utilize municipal and industrial waste with high ecological consciousness (practically no emissions and no residues during the RET-D5 process) and generate the revenue stream from the "gate fee" and sales of the market products: eco-energy, eco-fuels, chemicals, etc.). In many world locations RET-D5 Installation can stop the growing costs of the waste utilization and after a short time can significantly reduce those costs for waste owners/operators.

**RET-D5 Technology** – it is an anaerobic (*no oxygen*), high-temperature (*>850 C. and more*), thermal-catalytic degasification/devolatilization process that transforms municipal and industrial waste (medical waste included) to synthetic gas (SynGas). RET Installation and RET-D5 Technology process has no carcinogenic emissions (Furans, Dioxins, micro-particles, etc.) to the air, water and soil.

**RET-D5 Installation** generates SynGas who itself is the market-ready product as a gas-fuel for local heat or heat-and-power facilities – in locations where Natural Gas is not available at all, or not available in expected amount. SynGas could be mixed with Natural Gas to lower the Natural Gas price per MWh. SynGas is also the semi-product for generation of other market products: **eco-energy** (electricity, heat, chill, etc.), **eco-fuels** (Methanol, gas-DME, Jet-fuel, etc.) and **chemicals**. RET-D5 Installation can also transform coal and coal-waste into ca. 40% SynGas and ca. 60% "Blue-coal" (no-SMOG).

**Efficiency of the RET-D5 Installation as a combined heat and power plant (distributed energy CHP plant):** out of 50 ton of the dry feedstock (ca. 5% moisture achieved within RET Installation from any feedstock moisture level) installation can produce ca. 30,000 m<sup>3</sup> of clean SynGasRET with calorific value ca. 22-29 GJ/m<sup>3</sup> (depends of feedstock calorific value). RET-D5 Installation can transform/process SynGasRET in the CHP unit (1,5 MW – 2,5 MW) into 36-60 MWh of electric energy daily (ca. 13,000-21,000 MWh/year) and 120-150 GJ/day of waste heat (ca. 42,000-53,000 GJ/year).

**EFFICIENCY: 1 ton of waste = 1,1-1,5 MWh of electricity and 2,4-3 GJ of heat.**

**Efficiency of the RET-D5 Installation as the Eco-fuel Production Facility** (see: UE Eco-Fuels Directive): out of the 50 ton/day of the dry feedstock RET-D5 Installation can produce in Module IV. ca. 12,000 liters/day of Methane (ca. 4,2 million liters/year) or 24,000 liters/day of Dimethylether, gas-DME (ca. 8,5 million liters/year).

**RET-D5 Installation is Modular and Scalable** – we can integrate many singular RET-D5 Installations on one site, depends on the availability of waste/feedstock at the local market. It means that if we experience lowering or rising quantity of waste at the market – the number of RET-D5 Installations can be reduced or increased. At the singular RET-D5 Installation – we can process up-to 18,000 ton per year of dry feedstock and with the integrated, multiple RET-D5 Reactors Installation we can process up-to hundreds of thousands ton per year. **RET Installation is Mobile** – disassembly, transport, assembly and commissioning of the RET-D5 Installation at the new location takes between 8-16 weeks (depends on the size of installation and the allocation distance).

**RET-D5 Technology, as a „starved-air catalytic degassing waste devolatilization technology“** is included, based on references from the Polish Scientific Institutes, in the Polish government **"Program for Silesia Region"** – the integral part of the **"Strategy of the Sustainable Development of Poland"**, written by Prime Minister Mateusz Mazowiecki (<https://www.gov.pl/web/fundusze-regiony/program-dla-laska>, page 53). **RET Technology** is also in the Ministry of Energy document **"Innovations for energy generation"** (<https://www.google.com/search?client=firefox-b-d&q=innowacje+dla+energetyki>, page 33). **RET-D5 Installation** was recommended by a Polish Scientific Institutes, as well as by Community Council after a few presentations/discussions with Dr. Ron Baker and the RETco representatives.

**RET-D5 Installation investment is insured (i.e.: "performance bond")** by global insurance companies on the base of the global EPC company opinion/analysis. RET-D5 Installation Project can be finance by RET, Inc. (up-to 100% CAPEX) but PLUS Team with the local Business Partners may apply for any kind of financing from the local banks, investment funds and government programs – in exchange for the shares of the RET-SPV company.

**PL-US InnoTech GROUP** with offices in the USA and Poland **is the Exclusive, Strategic Business Partner of RET, Inc. company in Poland.** The RET company is the owner of the patents and "know-how", as well as design-engineer and supplier of the RET-D5 Installations. PL-US Team has the right to develop, build and operate RET Projects in countries world-wide, with the "fast path" for the country exclusivity option.

**PL-US Team is inviting** all the country/local governments, as well as municipal and private companies to cooperate over the RET-D5 Installation Projects development and deployment. The first step of our cooperation will be the preparation of the FEASIBILITY STUDY and negotiation/signing the 3 Project Agreements: 1. Feedstock Delivery Agreement; 2. Product Sale Agreement; 3. Site Control Agreement. STUDY with Project Agreements allow us to have up-to 100% Project Financing from Polish, US or international banking/investments institutions that finance the environmental Projects.

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