

# The future is electric

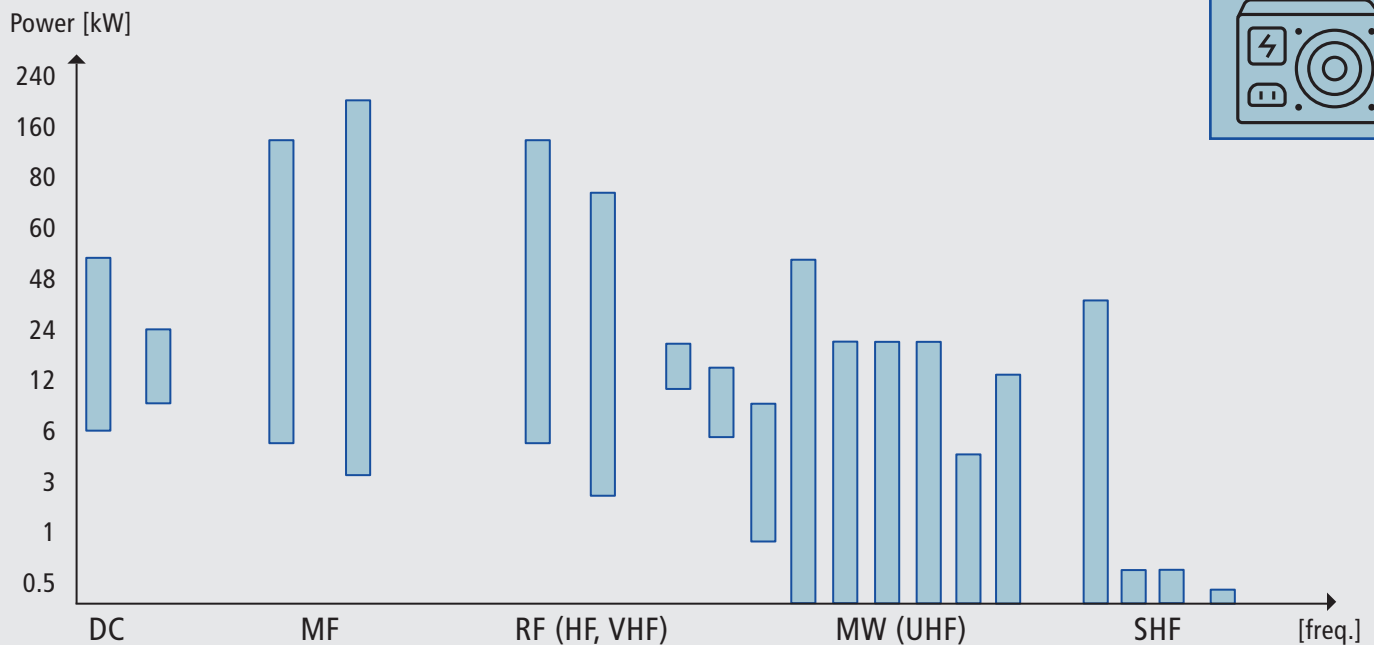
We help to enable the electrification of your industrial processes

## Fossil-to-Electric (F2E)

Electrification of fossil-based industrial processes is one of the most important strategies for CO<sub>2</sub>-mitigation. The electrification potential of Europe's industrial sectors is estimated to accumulate to approx. 800 TWh/a. The largest part is made up of the chemical, paper, food, glass and ceramics industries. There are already several electric heating concepts. Each requires specific electrical or electromagnetic power supply systems.

## TRUMPF Hüttinger Solutions

TRUMPF Hüttinger's power supply portfolio, ranging from DC to GHz power generators with output powers from a few to several hundreds of kW help you to drive the electrification of your industrial process. So you can find solutions that accelerate your path to decarbonization and help you achieve your ambitious sustainability goals.



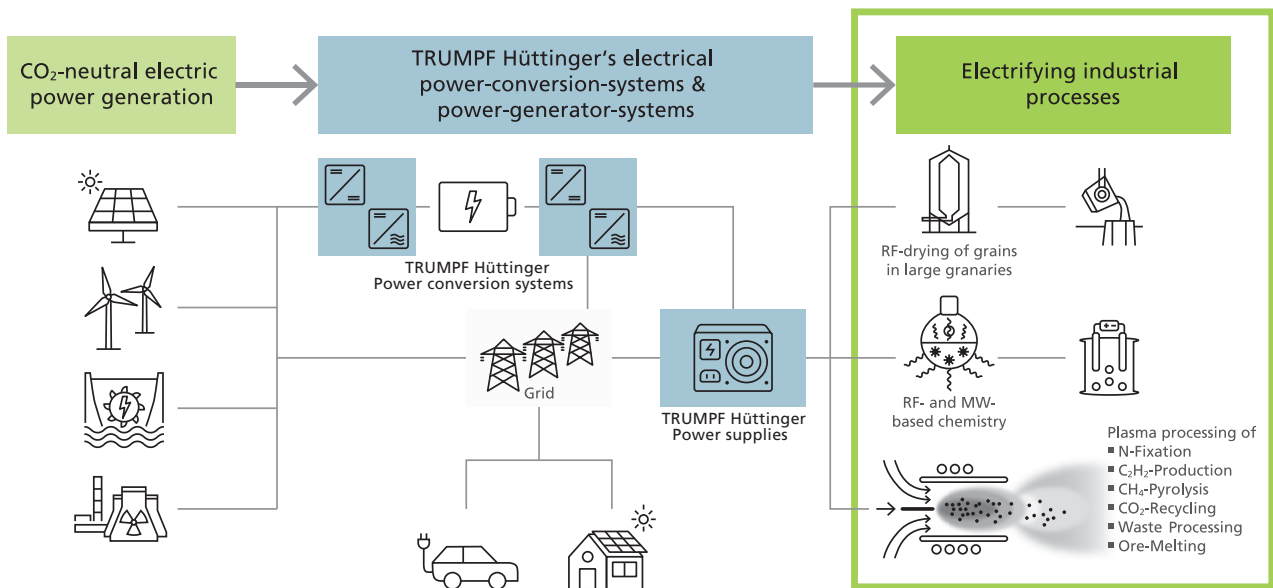
TRUMPF Hüttinger's power supply portfolio



**TRUMPF Hüttinger**  
generating confidence

# Electrification of Industrial Processes

TRUMPF Hüttinger's power-conversion- and power-generator systems are a fundamental enabler for the fossil-to-electric transition of industrial processes.



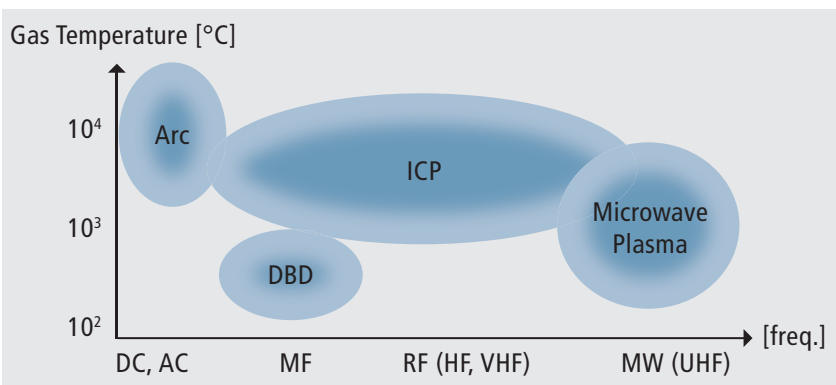
The first step is the energy transition towards utilizing CO<sub>2</sub>-neutral electric power generation. In a next step TRUMPF Hüttinger's power supplies custom tailor the electric energy towards the to-be-electrified specific industrial process.

## F2E Application Examples

Retrofitting of existing gas- and oil-burners is a hot topic in industrial sectors, like for instance metal, cement, or glass. Depending on the specific materials to be processed well-defined process parameters like temperature ranges, pressures, flowrates, etc. need to be realized. To generate these application-specific process conditions different plasma types can be utilized.

Each plasma type requires dedicated excitation frequencies for its plasma ignition and maintenance. Plasma processing can be used for various F2E-applications like for example:

- Methane plasma pyrolysis allowing turquoise H<sub>2</sub>-production and/or C-allotrope production (e.g. graphene, carbon nanotubes, fullerenes and diamonds)
- Acetylen production (C<sub>2</sub>H<sub>2</sub>)
- CO<sub>2</sub>-recycling
- Nitrogen fixation (incl. NH<sub>3</sub> production)
- Waste processing



Different plasma types like DC-/AC-arc, MF- or RF-inductively coupled plasmas (ICP), dielectric barrier discharge (DBD) or for instance microwave plasma (MW) can be utilized.

You are interested and would like to learn more? Contact us!

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