

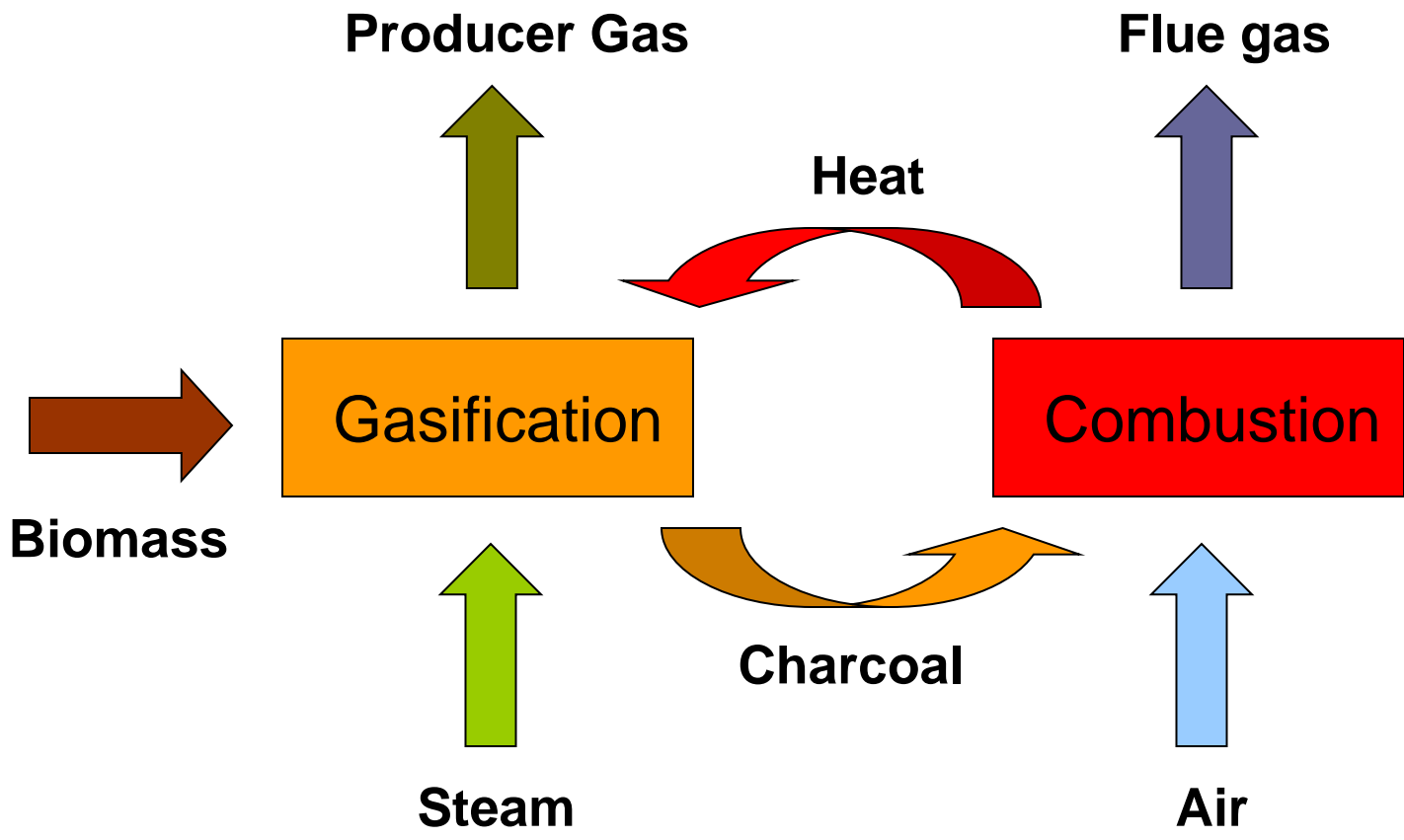
Biomass Gasification

Key Technology for the Production of Biofuels

Christian Aichernig

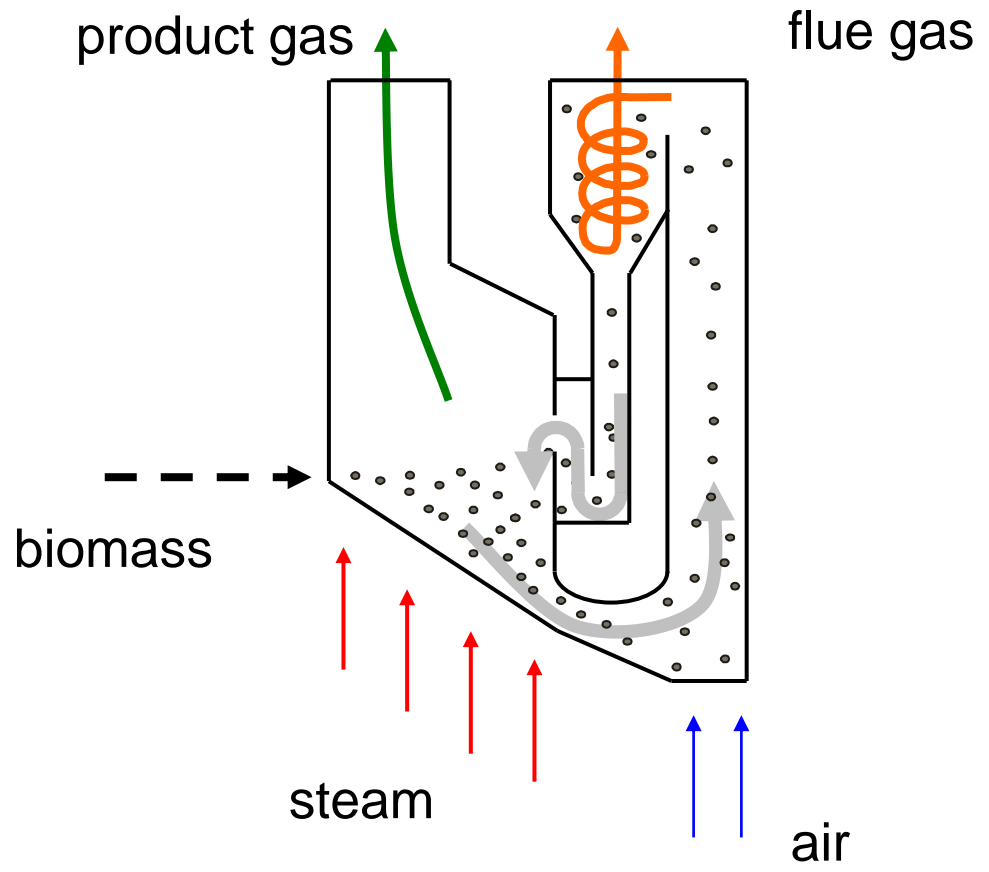


Gasification Concept





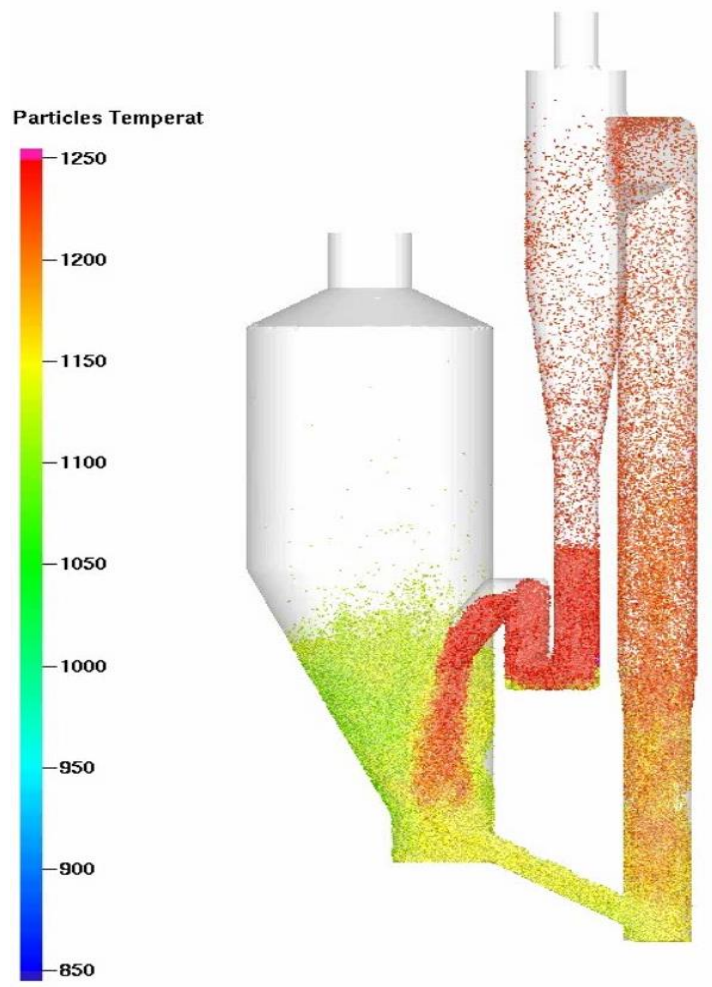
Gasifier





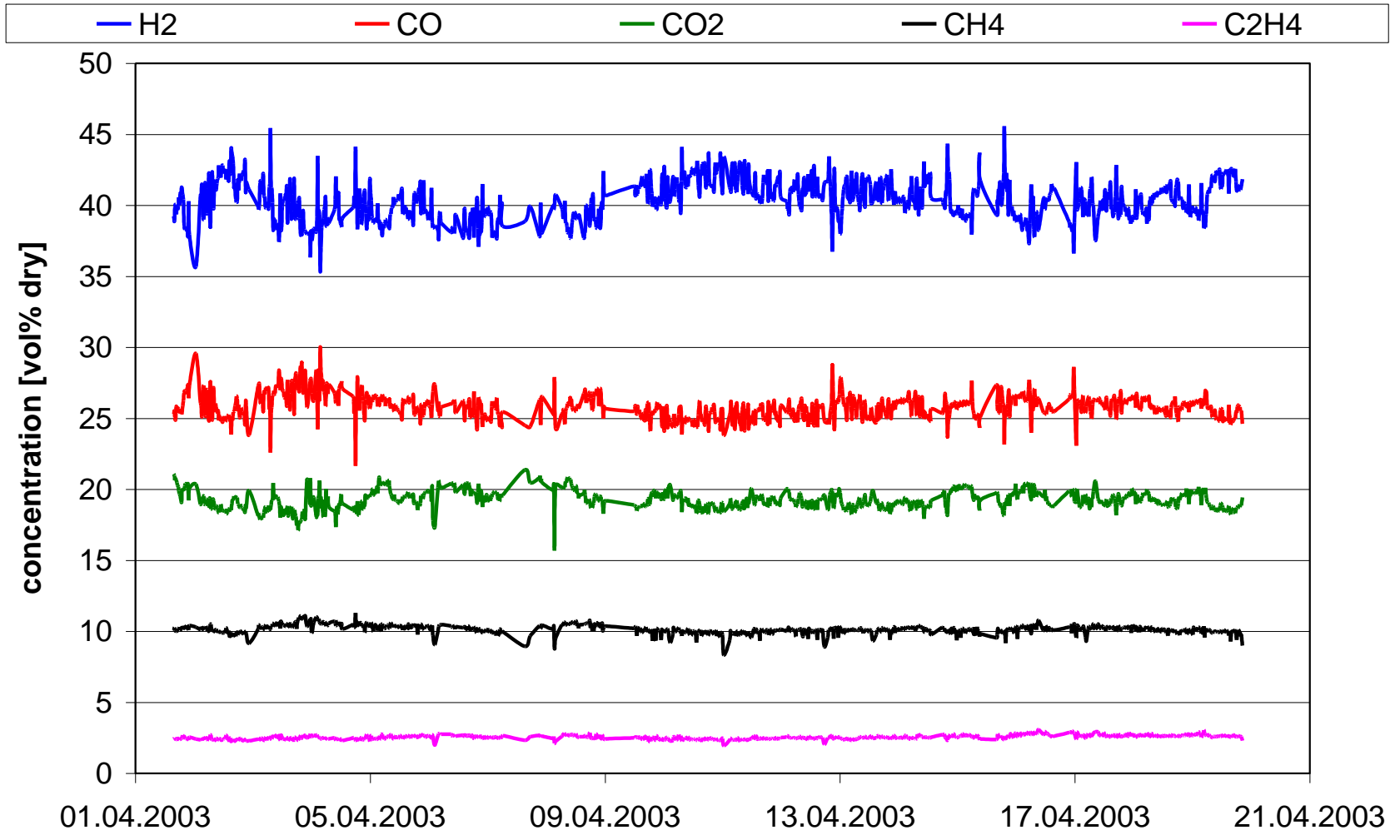
Gasifier

1.0000006e+02



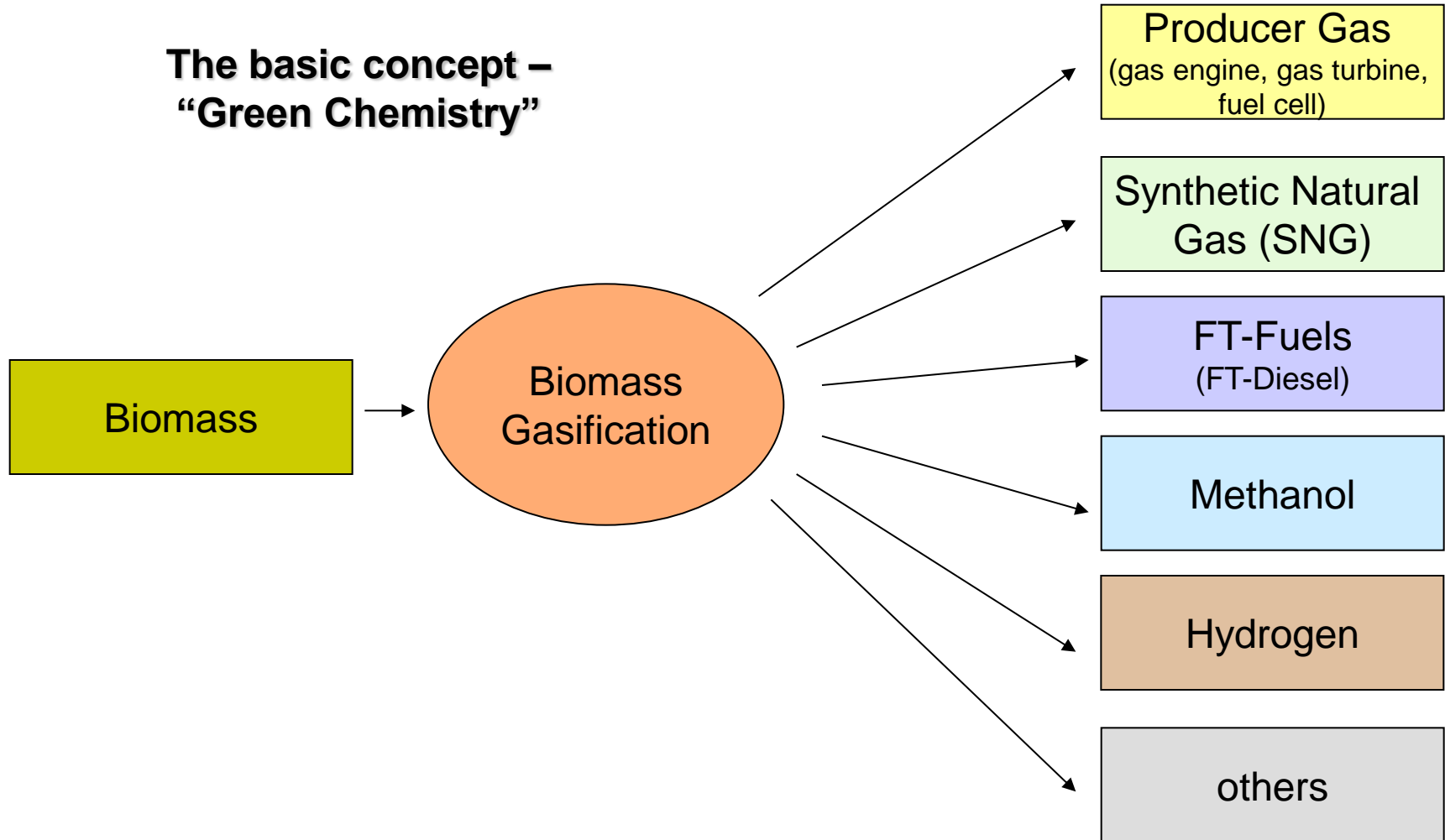


Gas Composition





**The basic concept –
“Green Chemistry”**





CHP Plant Güssing



Bio-SNG

Methanation (BioSNG)

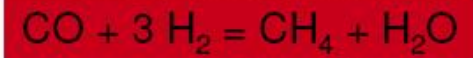
Fluidized bed reactor

Temperature 300-350 °C

Pressure 1-5 bar

Capacity ~ 10 Nm³/h

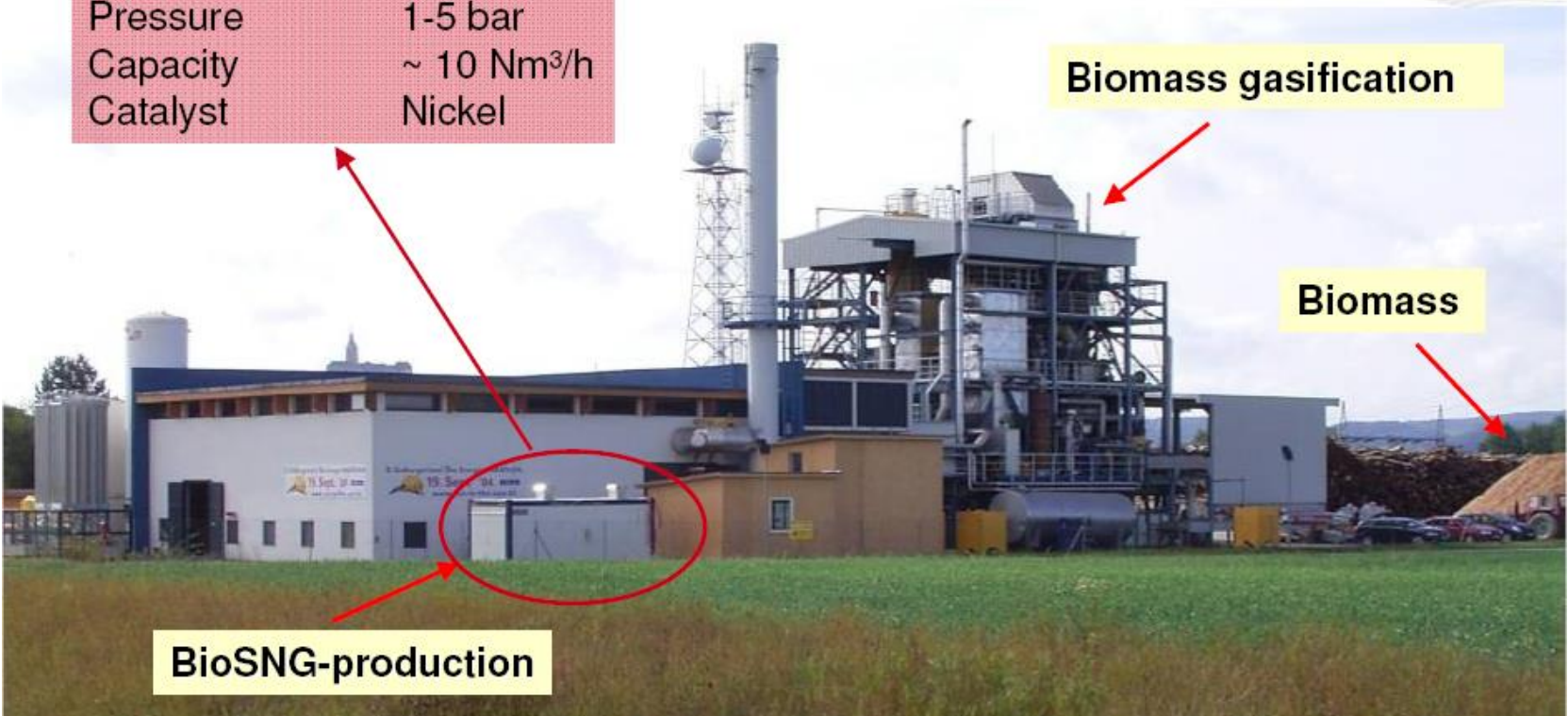
Catalyst Nickel

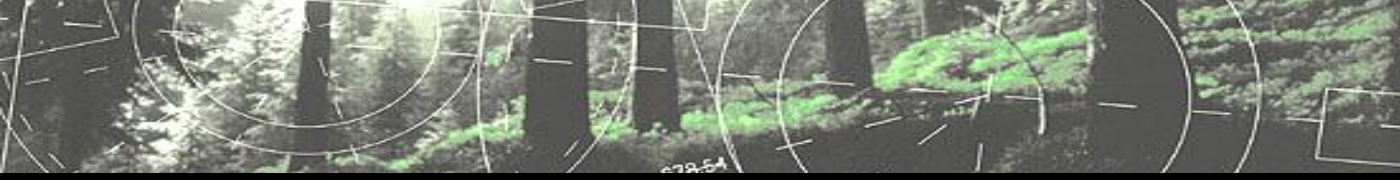


Biomass gasification

Biomass

BioSNG-production





Bio-SNG: 1 MW Demonstration Plant

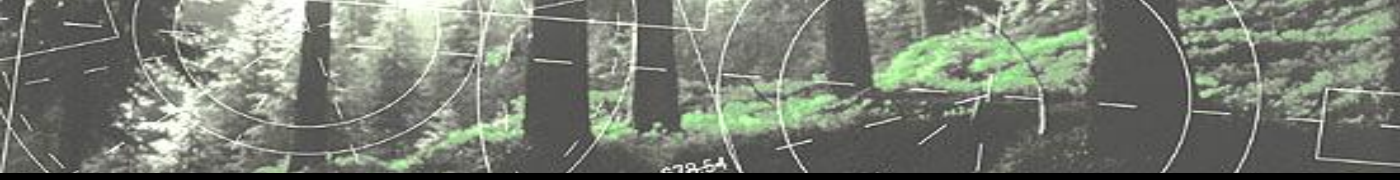




BioSNG-Plant GoBiGas

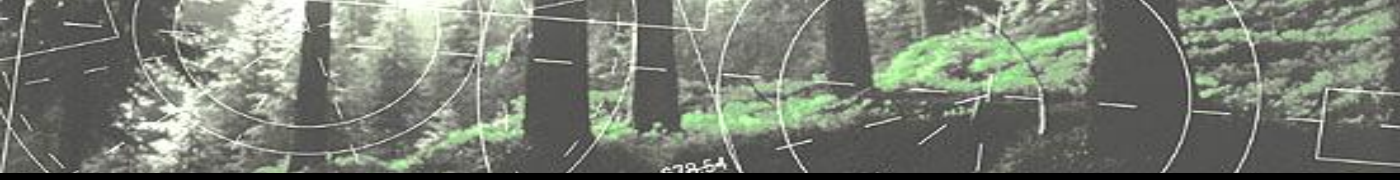
- **Start of Construction** **December 2011**
- **Start up** **October 2013**

- **Fuel** **Wood Pellets**
- **Fuel Power** **32 MW**
- **Produced SNG** **20 MW**
- **Thermal Power** **6 MW**
- **SNG Efficiency** **63 %**
- **Total Efficiency** **81 %**



GoBiGas Gasifier





Projekt GoBiGas 20 MW





FT Pilot PLANT



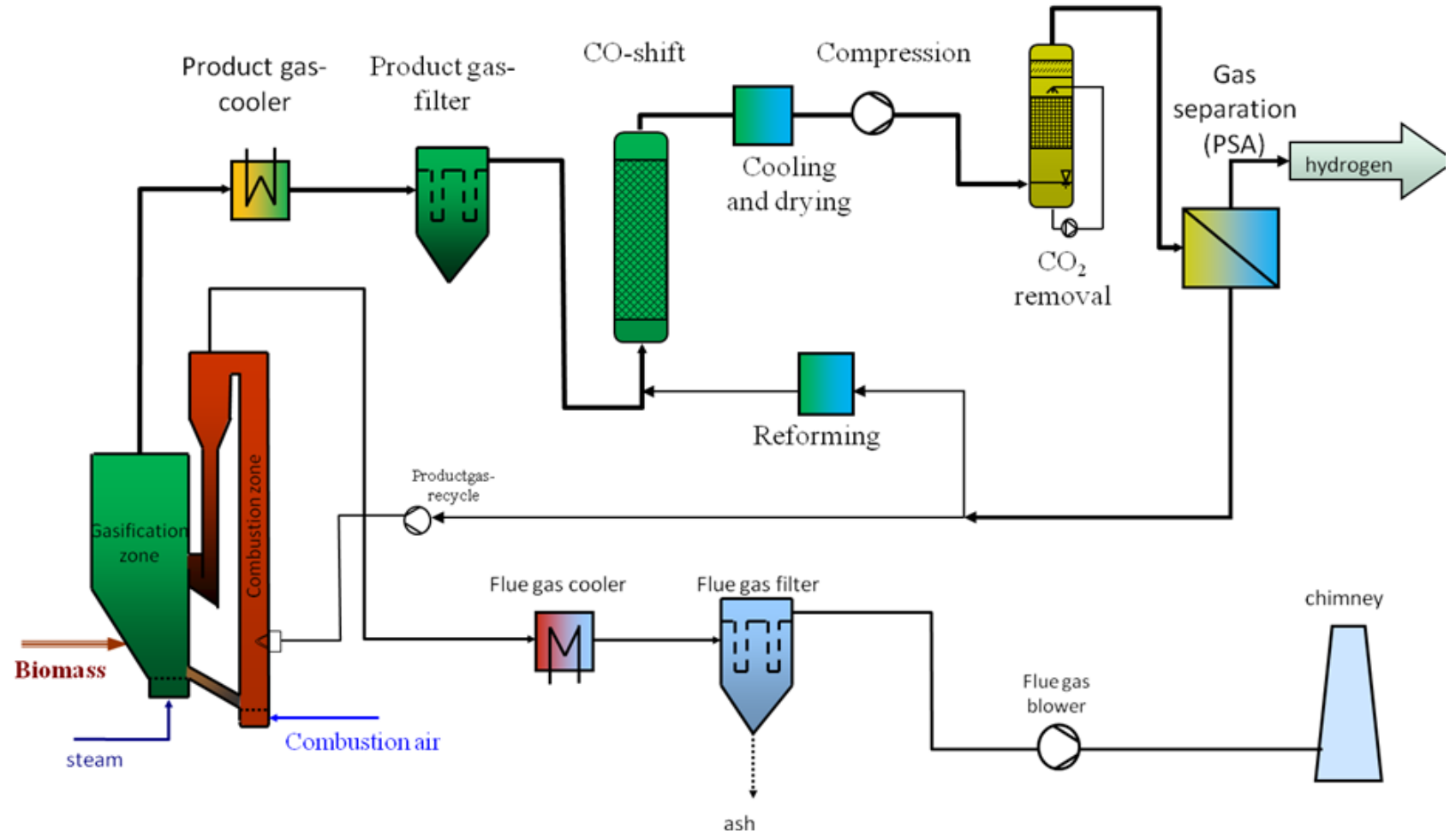


SGC XTLH1 Pilot PLANT





Bio H₂-4 Industries Process Flow Diagram





Bio H Bio H2-4 Industries Pilot Plant



Bio H2-4 Industries Demonstration Plant

Process Data					
Input			Output		
Biomass	kg/h	18 760	Hydrogen	Nm³/h	10 040
Biomass Water Content	wt%	40	Hydrogen Chem. Energy	MW	30
Biomasse Heating Value	MJ/kg	9.59	Heat	MW	9
Biomasse Chem. Energy	MW	50	CO2	Nm³/h	5 923



Acknowledgements:



FFG

COMET

Competence Centers for
Excellent Technologies

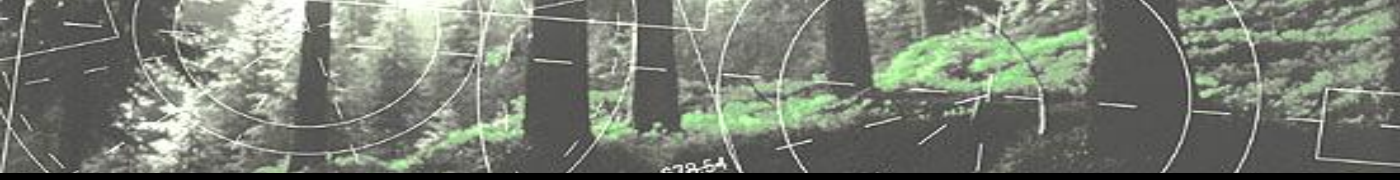


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