

Bioenergy and Sustainable Technologies



Competence Centers for Excellent Technologies

Bundesministerium Klimaschutz, Umwelt, Energie, Mobilität, Innovation und Technologie









BEST Syngas Platform Vienna

Making a concept into reality





Bundesministerium Klimaschutz, Umwelt, Energie, Mobilität, Innovation und Technologie









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	O) BEST
Target	Production of syngas from biomass and waste and downstream synthesis
Scale	1 MW DUAL FLUID gasification 250 kW Fischer-Tropsch synthesis
Operation	Campaigns for research operation
Fuel	wood chips, sewage sludge, plastic waste, sorted waste, agricultural residues

Syngas from DFB gasification





1 e.g. tar (incl. BTEX): 20-30g/m³, H₂S ~100 ppm for biomass fuel before any gas cleaning for downstream processing 2 Synt

2 Synthesis gas = cleaned from impurities



Location Overview



08.09.2022



Creating a versatile research location Part 1





Creating a versatile research location





Creating a versatile research location Part 3



Syngas Platform Vienna







Versatile operation in DFB system







Process chain for syngas conversion to hydrogen





Container-size hydrogen process chain





Container-size hydrogen process chain





Different process chain: Fischer-Tropsch synthesis



Bundesministerium Digitalisierung und Wirtschaftsstandort

💳 Bundesministerium Klimaschutz, Umwelt,

Für die Stadt Wien anstigle der Präsentation









Goal: complete process chain from gasification to synthesis First experiment: end of 2022



1 MW DFB gasifier

250 kW Fischer-Tropsch synthesis

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Experiment: Full process chain





Target	gas cleaning, operation stability PLUS fine gas cleaning, Fischer-Tropsch synthesis and analysis of syncrude	
Scale	1 MW DFB gasification + 250 kW Fischer-Tropsch synthesis	
Set-up	Long-term operation to minimize risk in industrial scale	
Operation	Operation Campaigns for research operation (3-4 weeks)	







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