



Green
Hydrogen
Technology

UNLOCKING THE POTENTIAL OF WASTE TO HYDROGEN

Intro GHT

OUR PRODUCT

HYDROGEN

**THAT IS PRODUCED,
WHERE IT'S NEEDED**



**Green
Hydrogen
Technology**

OUR FEEDSTOCK

**NON-
RECYCABLE
WASTE**

**THAT OTHERWISE IS
BURNED**

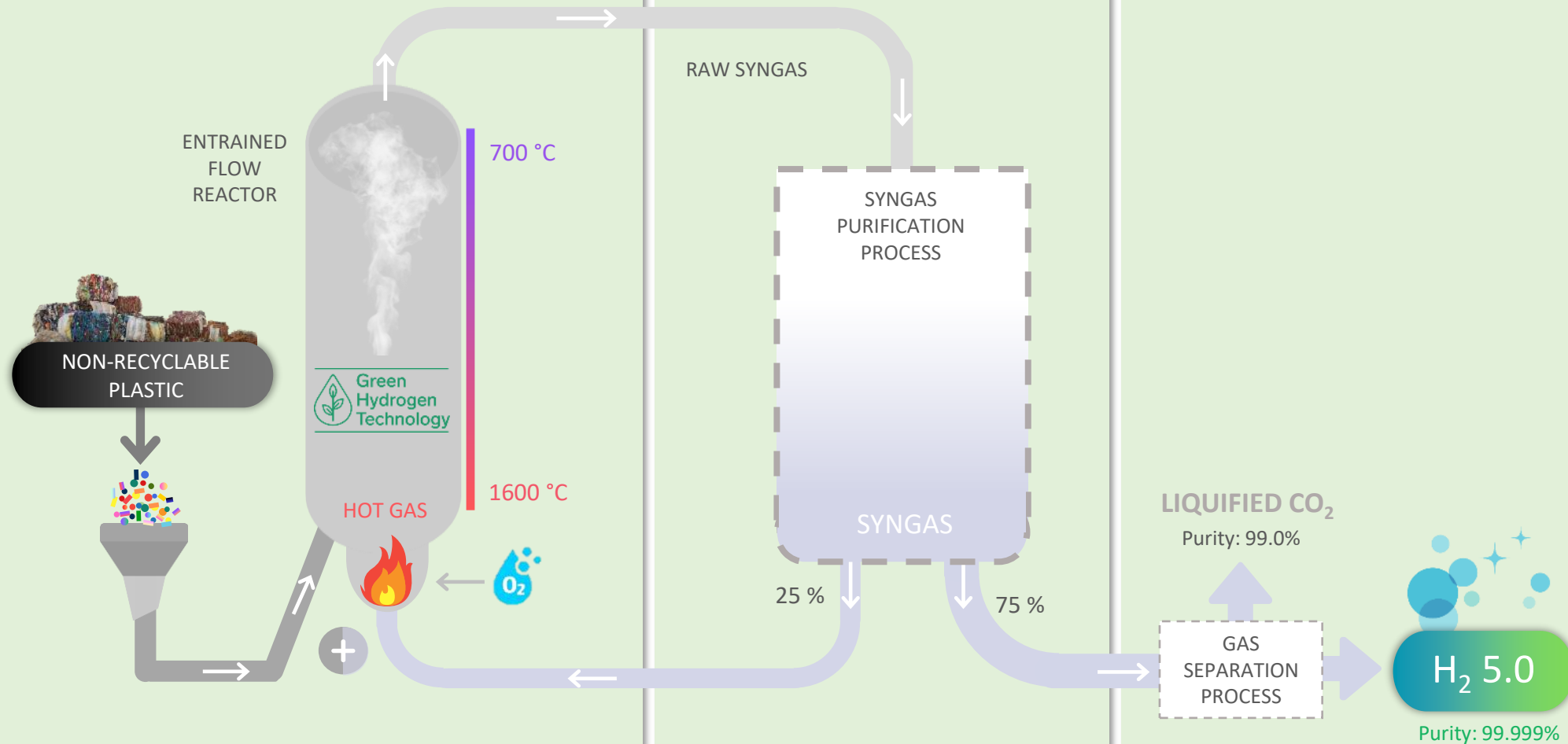
THE PROBLEM CONTAINS OUR SOLUTION

- 1 Syngas is produced through gasification of plastic-waste at high temperatures



- 2 Syngas is purified and partly looped-back in the process

- 3 Syngas is separated into Hydrogen and CO₂ – both at highest purities



WE WALK THE TALK: OUR PILOT PLANT IN AUSTRIA

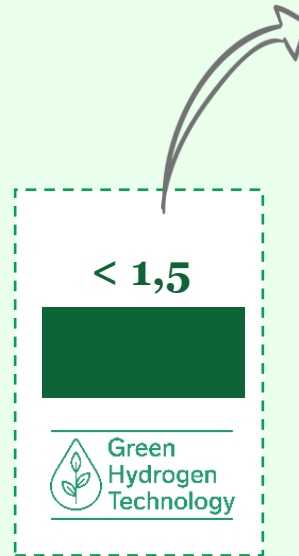
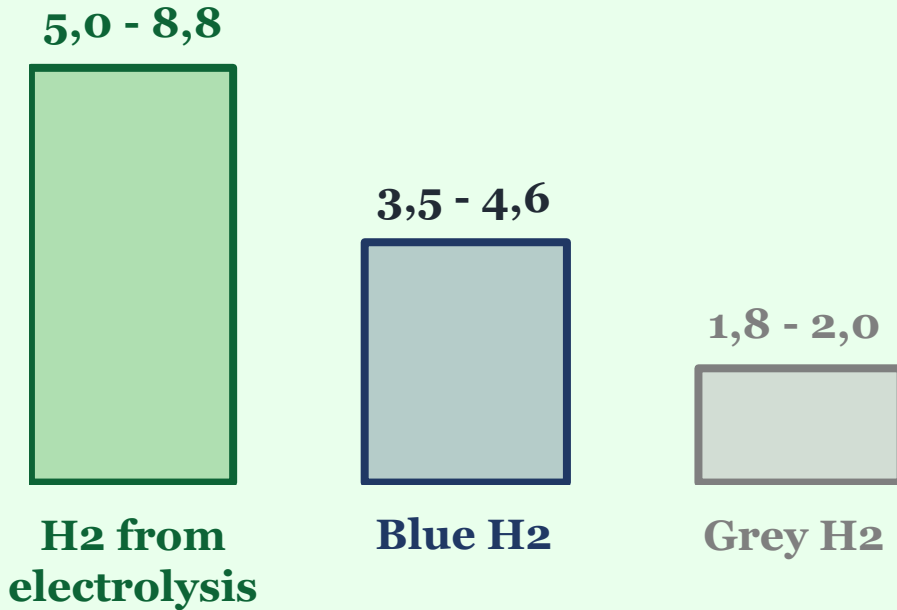


NEXT: 100t H₂ in Göppingen (Baden-Württemberg)



PRODUCE LOW, SELL HIGH.

Comparison Production Cost in €/kg H₂



GHT advantages

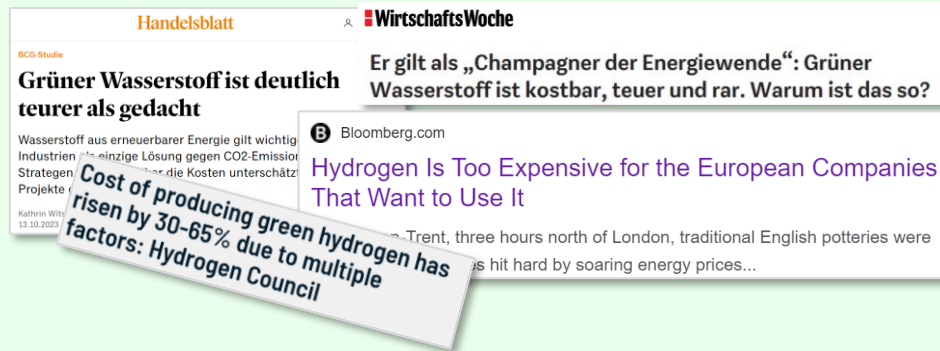
ECONOMIC

DECENTRAL

SUSTAINABLE

EFFICIENT

FLEXIBLE



Handelsblatt | WirtschaftsWoche

BCG-Studie: **Grüner Wasserstoff ist deutlich teurer als gedacht**

Wasserstoff aus erneuerbarer Energie gilt wichtig für die einzige Lösung gegen CO₂-Emissionen. Die Kosten unterschätzt man.

Bloomberg.com: **Hydrogen Is Too Expensive for the European Companies That Want to Use It**

Cost of producing green hydrogen has risen by 30-65% due to multiple factors: Hydrogen Council



With CO₂-Certificates even positive production cost possible

**FOR A
WORLD
WORTH
LIVING IN**



Green
Hydrogen
Technology

We have a strong, experienced and diverse management- and engineering-team committed to changing the world



MANAGEMENT



Robert Nave
CEO & Geschäftsführer
McKinsey & Company J.P.Morgan



Harald Mayer
Gründer, Unternehmer
und Investor
HAMA
TRUCKS

KERNTEAM



Nadia Romdhane
Head of Process Engineering
Process Engineer mit 7+ Jahren
Erfahrung in der Planung von
Biomasseverwertungs- und
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Daniel Buchholz
Senior Project Manager
Mechanical Engineer mit 13+ Jahren
Erfahrung in Industrieanlagen für
Hochtemperaturprozesse



Rafael Suter
Software/Automation Engineer
Software Engineer mit 12+ Jahren
Erfahrung in der Programmierung und
Inbetriebnahme von Industrieanlagen



Kelechi John
Process Engineer
Process Engineer mit 3+ Jahren Erfahrung
in der Prozesssimulation, -analyse und
-optimierung

BEIRAT



Dr. Philipp Härle
McKinsey
& Company
HENGELERMUELLER



„Energiewende ist
Teamsport“

The modular nature of our technology allows processing a broad range of feedstock types to produce different forms of green molecules – all of this at different scales and capacities

Variety of inputs...



Biogenic

(e.g. wood-waste, straw, bagasse, miscanthus, digestate)



Non-biogenic

(e.g. non-recyclable plastic, RDF, process waste)

Feedstock requirements:

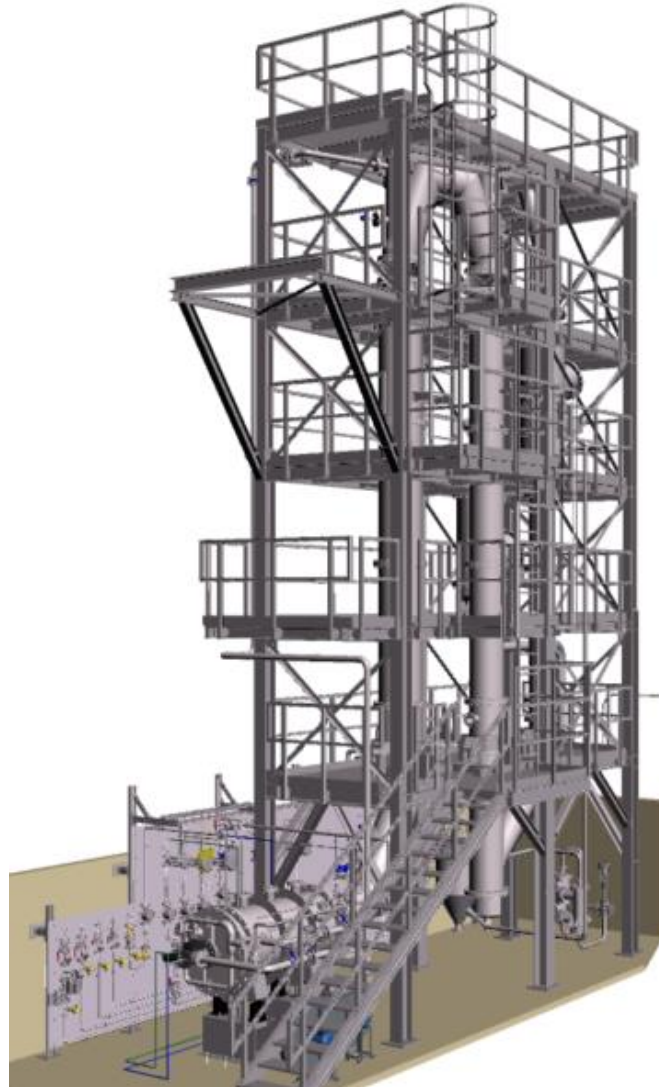
- high calorific value (>12 MJ/kg),
- “conveyable” shape and form (ideally 2D material)
- moderate chlorine content (PVC<1.5%).

...and outputs



Local green gases

(e.g. hydrogen, syngas, methane, methanol, synfuels)



Variety of scale

GHT use cases¹⁾

Small decentral plant

Medium-sized recycling company

4,8k tons wood waste

400 tons H₂

14 tsd.
tons CO₂ savings

Industrial decentral plant

Industrial packaging producer

18k tons plastic waste

1,340 tons H₂

43 tsd.
tons CO₂ savings

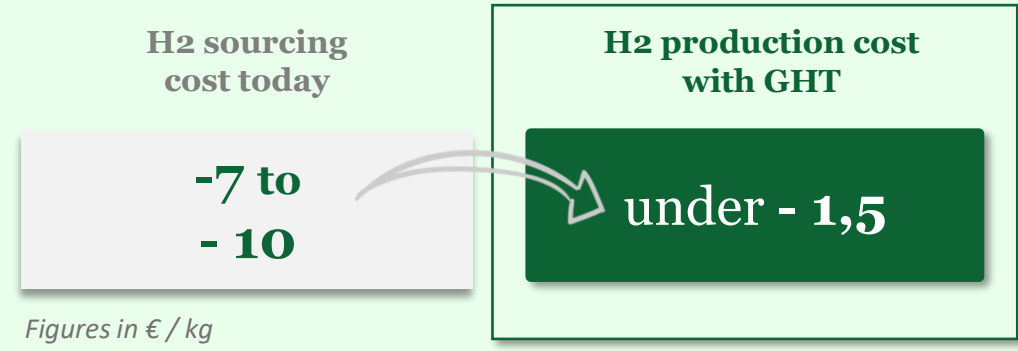
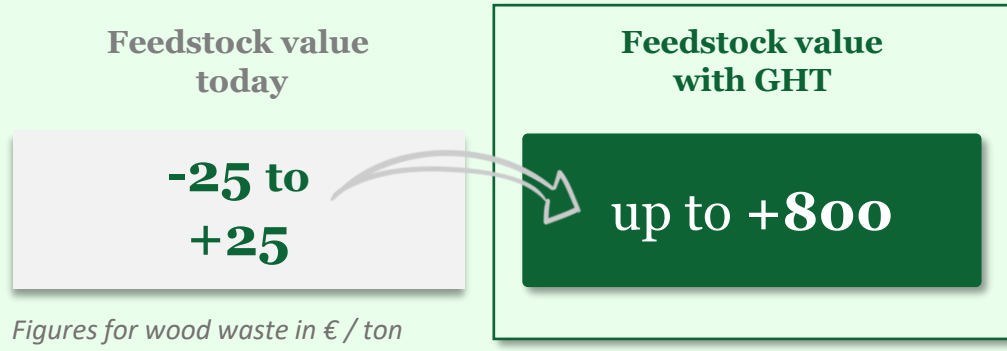
1) Figures represent annual capacity

Our plants reach groundbreaking economics even with relatively small plants and provide no brainier business cases for many feedstock owners and offtake users









Feedstock-focused

Offtake-focused

Value creation rationale¹⁾
Example biogenic plant



Examples customers

<p>Recycling companies</p> 	<p>Packaging producers</p> 	<p>Transport companies</p> 	<p>Industry companies</p> 
<p>Agriculture businesses</p> 	<p>Waste incinerators</p> 	<p>Energy companies</p> 	<p>Chemical players</p> 

1) Calculations reflect small decentral plant (4,8k tons capacity) on the basis of biogenic feedstock (e.g. wood)