



We Care for a Better Future.



NetZero In Mining

Patrick Carr – Business Development Manager



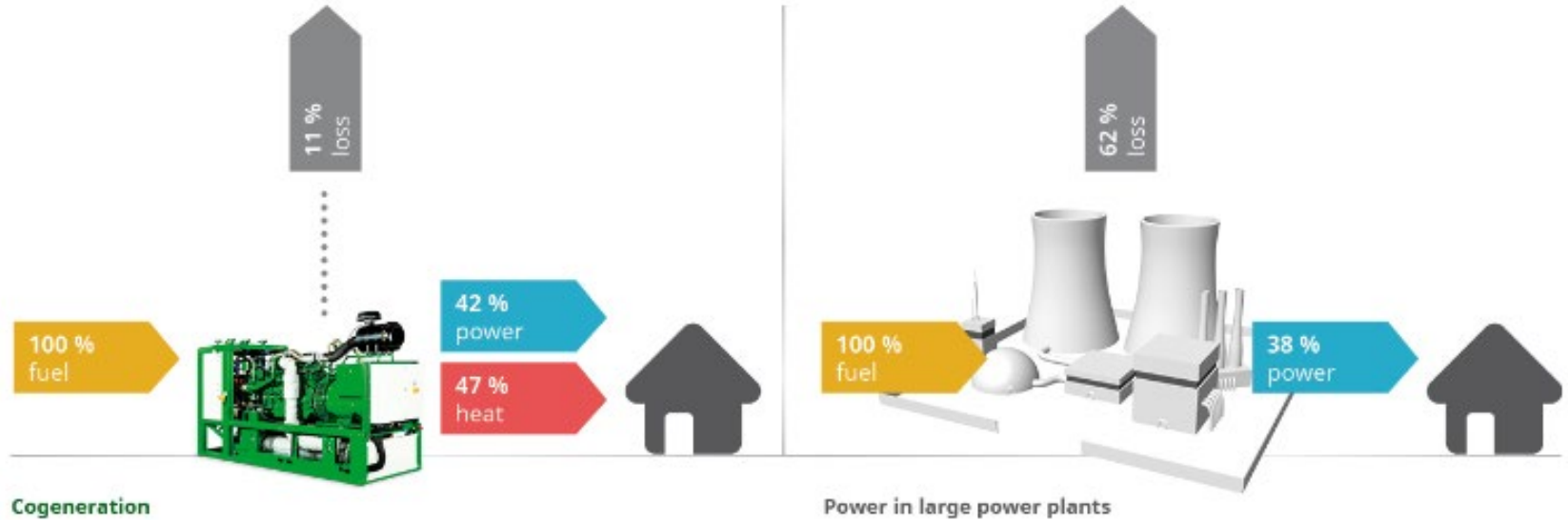
2G. Worldwide Success with CHP.

- Founded in 1995 - Headquarters in Heek in North West of Germany
- Global Organization with over 6500 systems installed worldwide
- Specializing in Complete, Pre-engineered CHP and Gas-To-Power solutions
- Individual Systems; 60kW to 2.5MW
 - Natural gas, biogas, hydrogen
- 2G is OEM for portion of engine line up
- Successful R&D – led to development of 1st Hydrogen CHP system

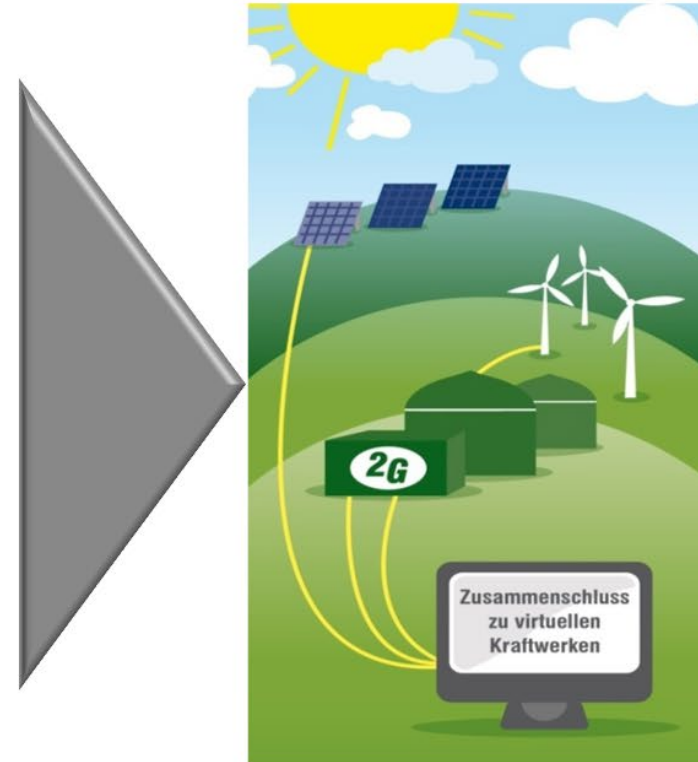
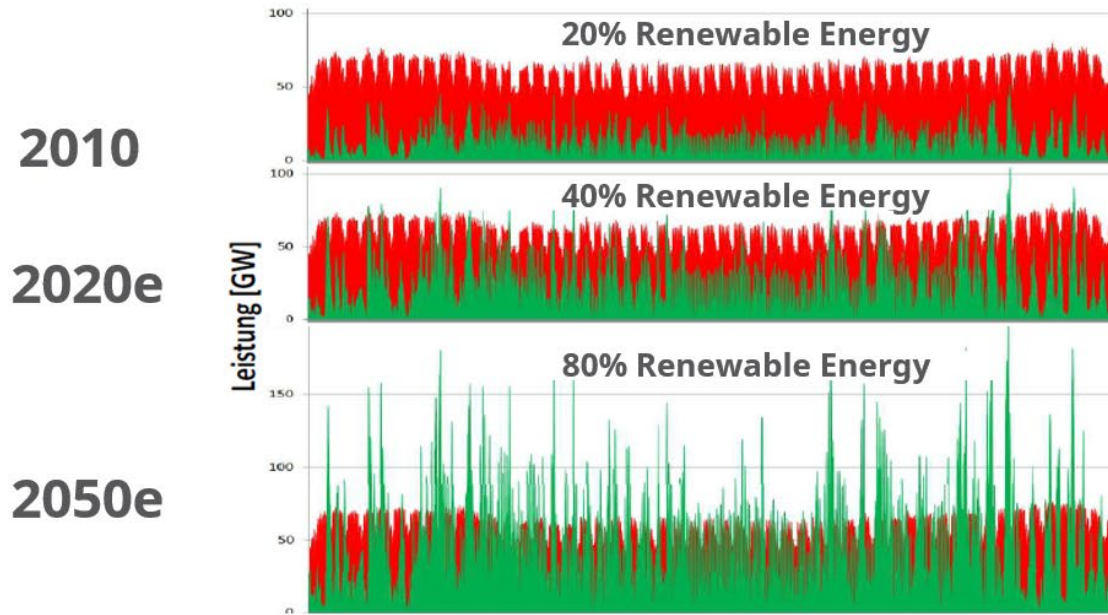


The future is here.

Baselining the Opportunity.

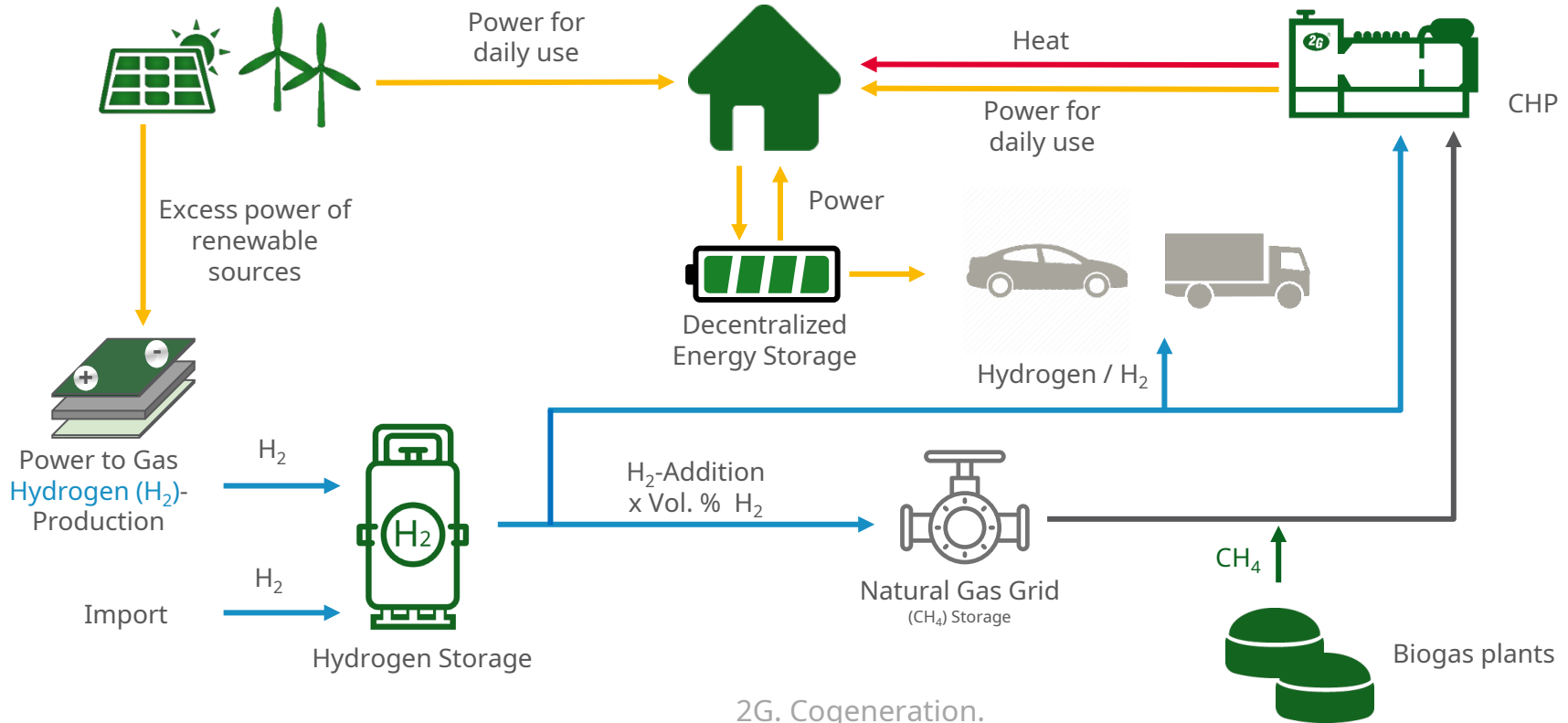


Changing Role of CHP Technology – Based on Demand.



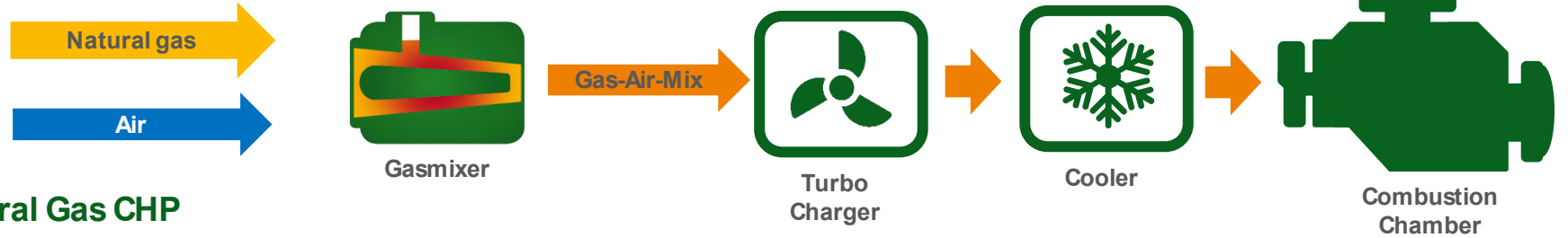


Power to Gas.

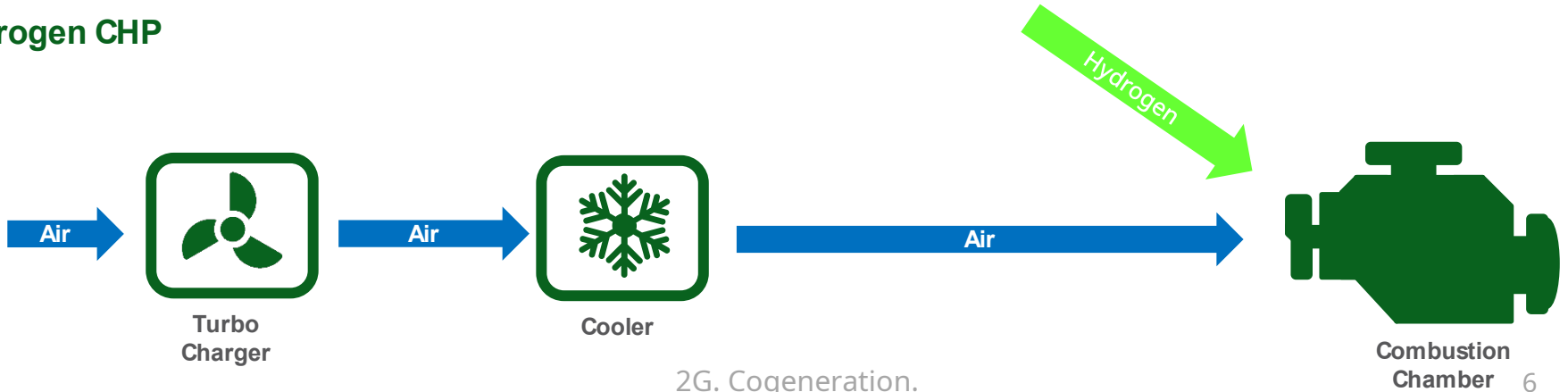




Comparison: Natural Gas CHP vs. Hydrogen CHP



Hydrogen CHP





Hydrogen CHP by 2G

Module	agenitor 404c Hydrogen	agenitor 406 Hydrogen	agenitor 408 Hydrogen	agenitor 412 Hydrogen	Agenitor 420 Hydrogen
Electrical output	115 kW	170 kW	240 kW	360 kW	650 kW
Electrical efficiency	37.7 %	39.0 %	40.2 %	40.5 %	41.1 %
Energy input*	306 kW	454 kW	622 kW	921 kW	1649 kW
Thermal output	129 kW	183 kW	250 kW	371 kW	687 kW
Thermal efficiency	42.3 %	41.9 %	41.9 %	41.7 %	39.3 %

* 1 kg H₂ = 33 kW energy input



Opportunities Get Defined.

The Economics

- Today vs Tomorrow

Requirements to Meet Emissions Targets

- Carbon Pressure

Corporate Branding

- Supply Chain Positioning
- Steps to NetZero

100%
Hydrogen
Today!

Blending up to
40% Hydrogen

Natural Gas
Today
Hydrogen
Tomorrow

Hydrogen project: APEX Energy Tetrow GmBH

Innovative Hydrogen CHP enables operation with pure hydrogen
And serves as the heart of this 2 MW plant

- At its location in Rostock-Laage, APEX Energy operates the hydrogen center in northern Germany
- Europe's largest grid-connected hydrogen plant supplies the entire site with CO2 neutral energy.
- Consists of:
 - 2MW electrolyzer with H2 storage
 - 115 kW CHP from 2G
 - Battery storage with 1 MWh capacity
 - Fuel cell with 100kW power





Take Away for Active Steps.

A Plan For Sustainability

- Ease of securing permitting?

What Steps Will you Take?

- Time To Reduce GHGs

Successful Solution

- 2G Energy – CHP and G2P
- Future Building
- Scalable Steps in Reducing GHGs

100%
Hydrogen
Today!

Blending up to
40% Hydrogen

Natural Gas
Today
Hydrogen
Tomorrow



Thank you very much for your attention!



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