

COGEN EUROPE

Hydrogen for Buildings and Industrialised Heat



2nd European Hydrogen Week – B2B Forum

23 November 2023
Brussels, Belgium

Smart Green City Haßfurt

Pioneering Net-zero Tech Integration



Net-zero Technologies Combined

PV & Wind

- Production growth from 29% to 208% of local demand between 2010-2017.
- 10 MW of PV.
- 31 MW of wind.

Electrolyser

- Peak output of 1.25 MW.
- Enables local compensation of RES. power surpluses and shortages.
- Converts excess PV & wind into RES H2.

Storage, Smart Grids & Digitalisation

- 8 MW battery to integrate higher shares of PV/wind
- Heat & H2 storage systems in place
- Electrolyser connected to Next Kraftwerke Virtual Power Plant to stabilise power grids
- EV charging & 10k smart meters

2 X Cogeneration

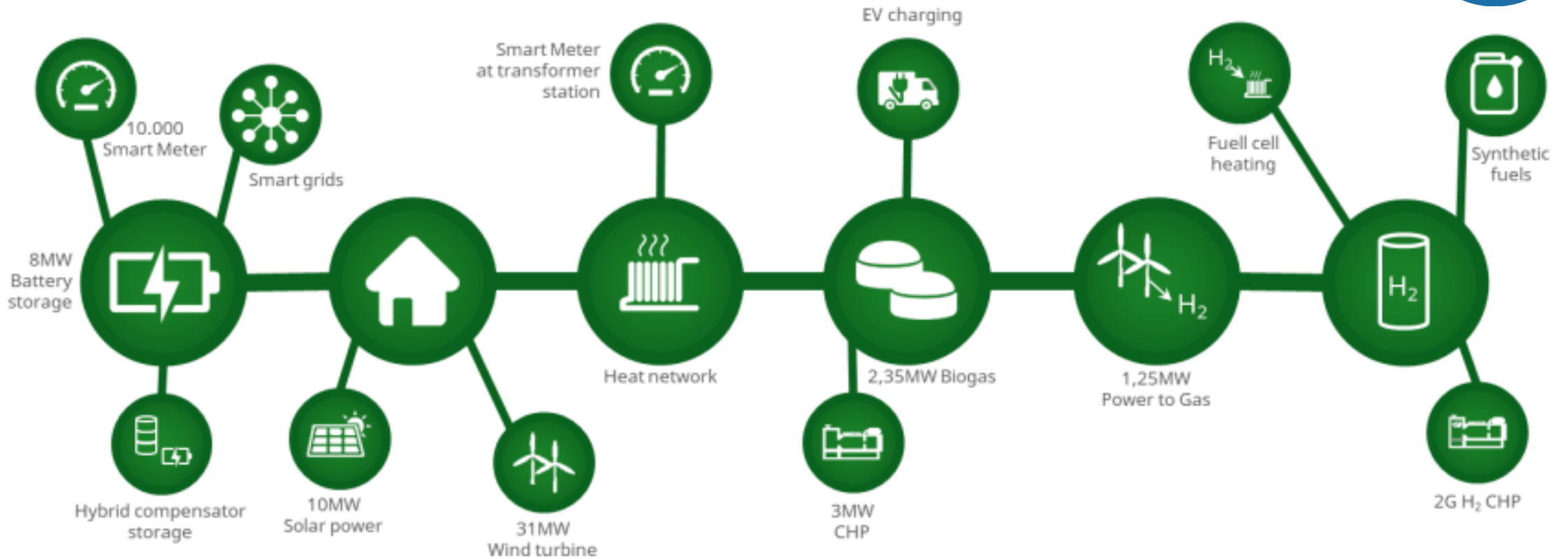
- Efficient production of heat for DHC & electricity to support the grids.
- 3 MW CHP running on locally produced biogas.
- First ever 100% H2 CHP (140 kW_e), able to quickly ramp up and down to complement PV/Wind.

District Heating

- Integrates all green heat sources available.
- CHP heat from biogas & RES H2.
- Waste heat from biogas plant.

Reference Project

- Part of the BMWStB Modellprojekte Smart Cities (MPSC) Programme.
- Project supported by the Bavarian State Ministry for Economic Affairs.
- PtG commissioned via Greenpeace Energy.



Net-zero solutions optimally integrated:

- ✓ Decarbonise heat & power;
- ✓ Integrate high shares of RES;
- ✓ Support local resiliency; and
- ✓ Lower cost for consumers.

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