Cluster Project Carbon2Chem®
Cross-Industrial Network  Steel - Chemistry - Energy
Cluster Project Carbon2Chem® - Overview

Steel industry: present situation
- approx. 43 Mio t steel p. a., 80 sites in Germany (NRW: approx. 17,2 Mio t/a)
- CO₂-emissions: approx. 58 Mio t CO₂/a
- approx. 7 % national
- reduction plan industry 2030: 50 %

Project objectives
- cross-industrial production network
- increased efficiency
- reduction of total emissions potential: 20 Mio t/a

Quelle: Fakten zur Stahlindustrie 2016, stahl-online.de
Concept of Carbon2Chem®

Present integrated steel production

- blast furnace
- converter
- coke oven plant

Top gas:
- CO, CO₂, H₂, N₂: 2.3 Mio m³/h

New cross-industrial production network

- blast furnace
- converter
- coke oven plant
- electrolysis

Top gases:
- x%
- y%
- z%

Hydrogen:
- Hydrogen production

Chemical production:
- Chemicals
- Fuels
- Fertilizer

Steel production:
- Steel production

Power station:
- Energy production

CO₂ recycling:
- CO₂ recycling
