

# AB is the global reference for energy sustainability solutions

**Cogeneration from methane and biogas, biomethane and treatment of emissions into the atmosphere.**



- Plants, skills, technologies, service.
- We have been working alongside companies who want to improve their competitiveness, saving energy and limiting emissions into the environment.

**For over  
40 years**

Funded and HQ in **ITALY**

About ab

• **+40** years of experience

• **140** engineers

• **+1,300** employees

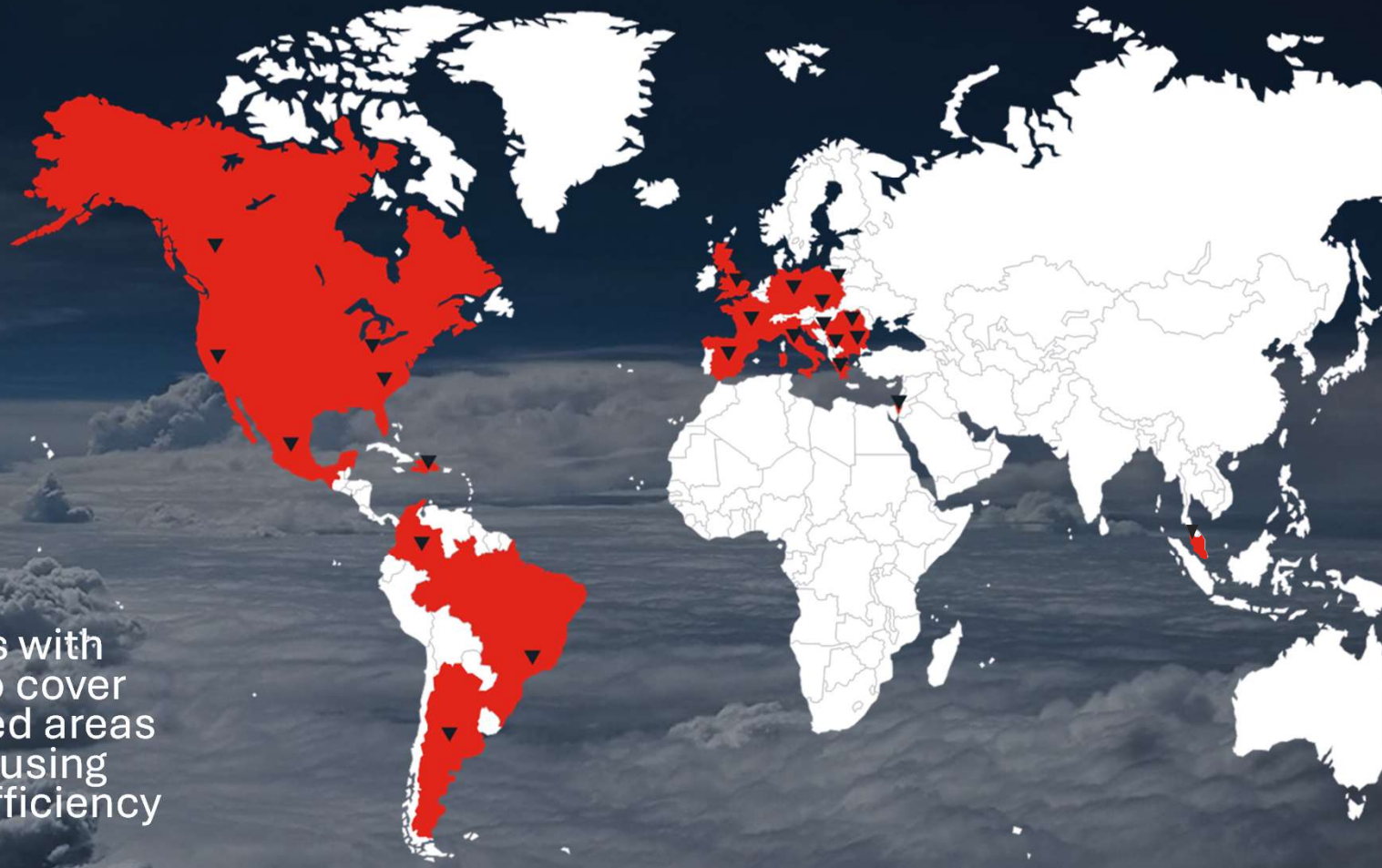
• **+300** specialist technicians

• People are our first business value. Multidisciplinary and shared skills, driven by a passion and a common vision, able to bring performance to the highest levels.

• **+1,300** cumulative years of service experience



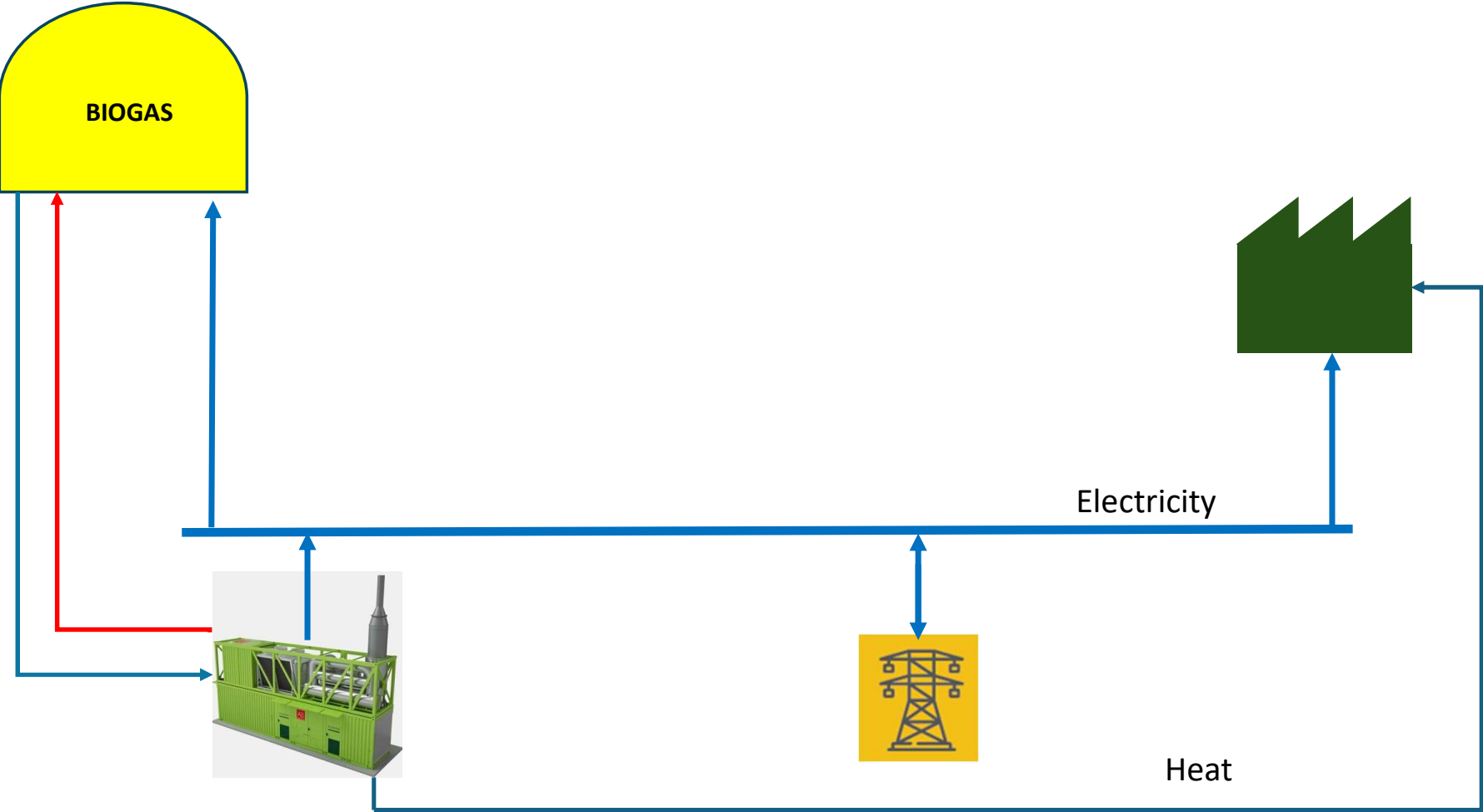
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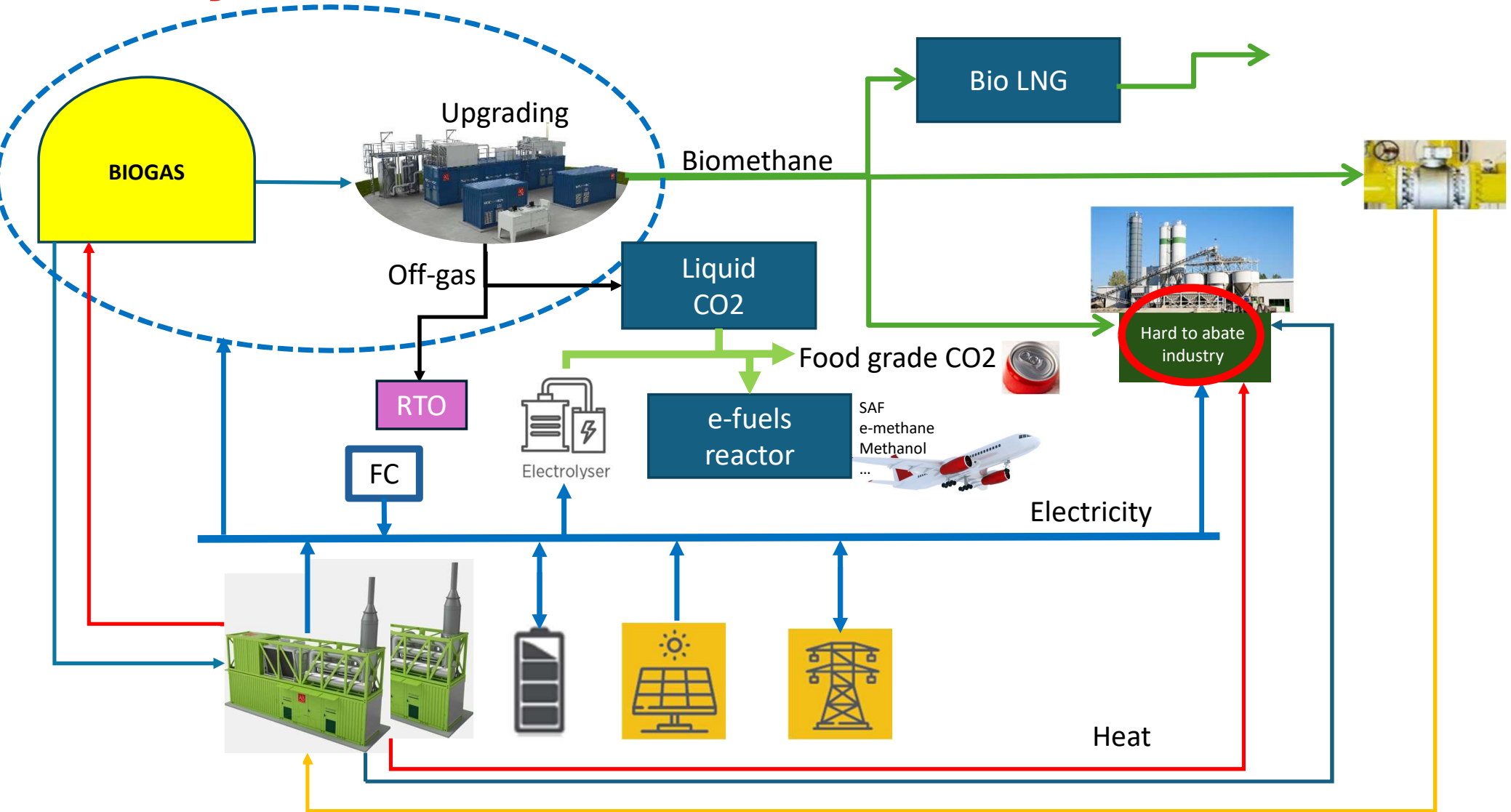
- AB is a group of companies with offices all over the world to cover both the more industrialised areas and emerging markets, focusing their attention on energy efficiency as well as sustainability.

**AB IN THE WORLD**

# Biogas yesterday

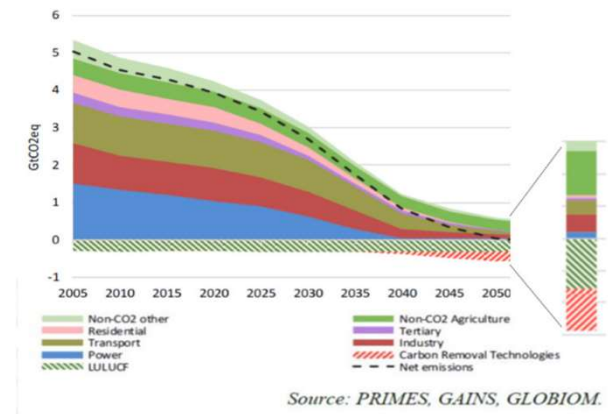
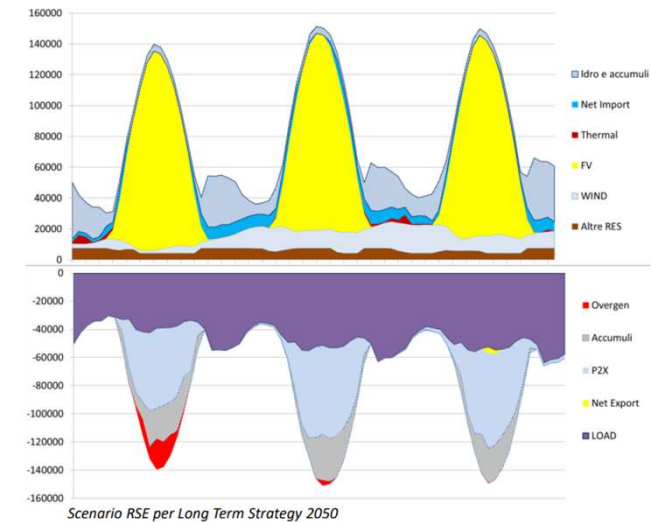
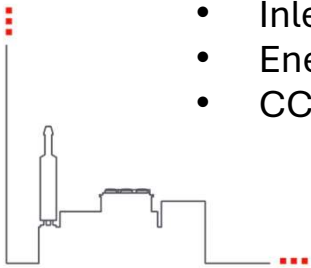


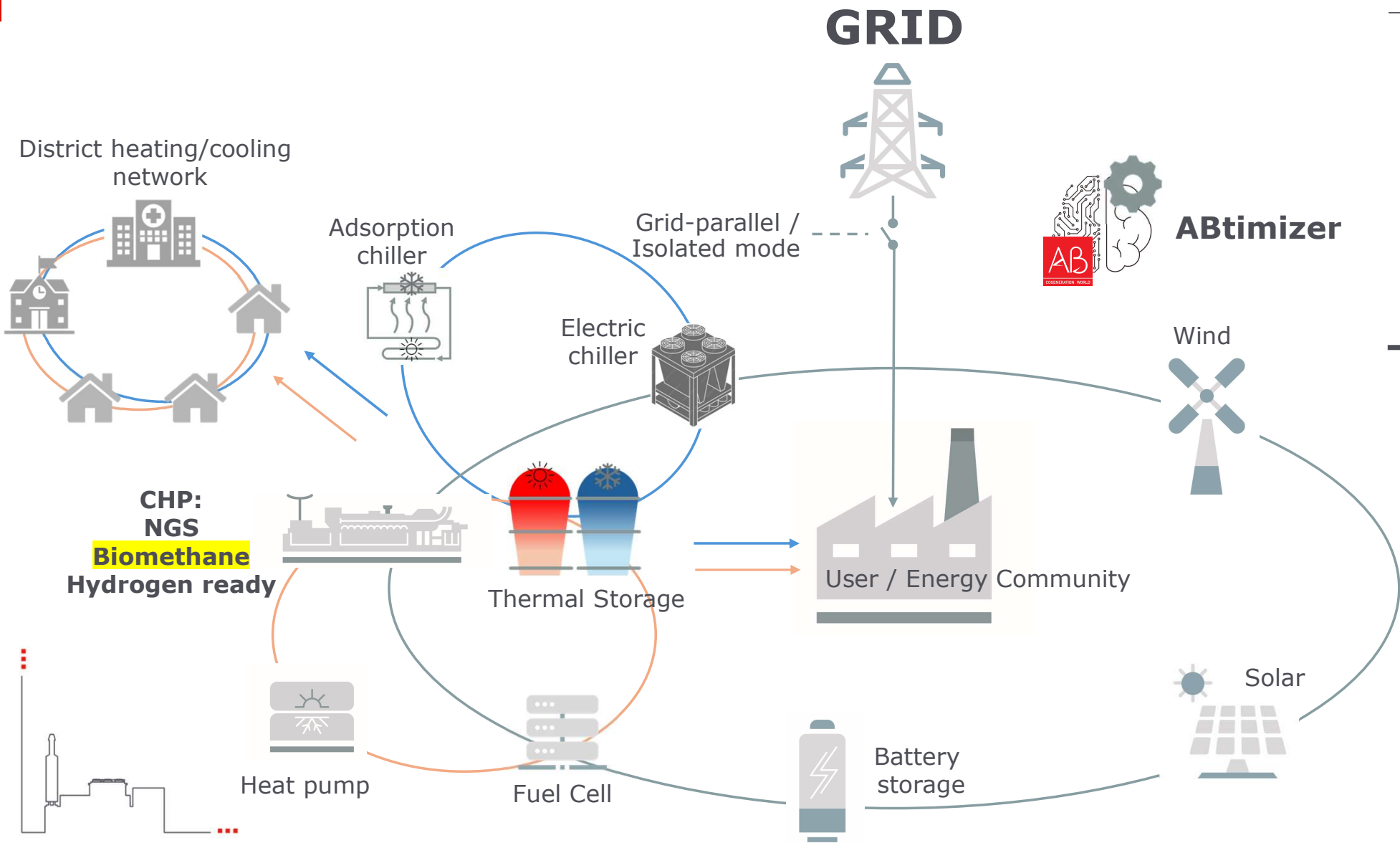
# Today and on...



# Challenges of modern industries/post 2020

- **Complex international scenario**
  - Instability
  - Tariffs
  - Rules
- **Competitiveness**
- **Energy**
  - Costs
  - Price Volatility
  - Availability
  - Priority to renewables: storage – dispatchable DER
  - Push for electrification including new loads (e.g. BEV)
- **Growing demand for low-carbon products**
- **Decarbonisation**
  - Inlet
  - Energy efficiency and resiliency
  - CCUS

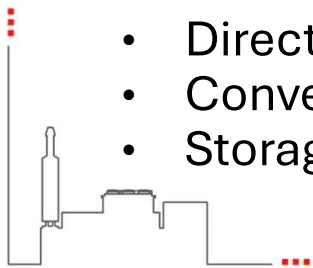






# Applications

- **Trigeneration**
- **Isolated mode**
- **Greenhouse + thermal storage**
- **CHP + PV + Storage**
- **Isolate mode with kinetic storage**
- **Data center**
- **Heat pump coupling with CHP**
- **FC base load + PV + CHP for resilience**
- **FC + CO2 capture**
- **CO2 capture from exhaust gas**
  - Direct CO2 use, e.g. food grade: VOLUMES!
  - Conversion to e-fuel, green chemicals: H2!
  - Storage





# Conclusions

- **Biomethane: now and here for transport and industry decarb**
  - 1 + 1 Bm3
- **CO2 CCUS**
  - Available technology
  - Market dilemma
- **Effort on resilience and wide spectrum technology deployment**

Thanks

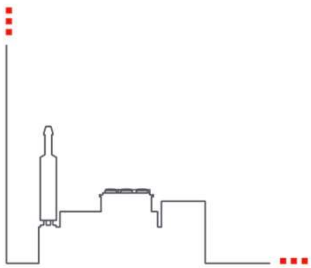
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# Domanda mentimeter

- **A quanto equivale l'abbattimento delle emissioni di CO2 attuato nel 2023 cumulativamente tra UE e USA?**
  - A) Il 64% rispetto al 1990
  - B) L'equivalente delle emissioni annuali dell'Italia
  - C) L'equivalente delle emissioni annuali in Cina
  - D) L'80% dell'incremento delle emissioni di CO2 in Cina nel solo 2023

**Risposte esatte: B e D**



# Domande per Enrico Calzavacca

- **Modalità e quantità disponibili di acquisto del biometano da parte dell'industria? Ad esempio come si può certificare uso del biometano per abbattere obblighi ETS**
- **Quanta CO2 si può catturare da un impianto biometano o da un impianto di cogenerazione industriale?**

