CBR ROUND 2 ENGAGEMENT:
SESSION 2: ENERGY INTENSIVE INDUSTRY
1. The GHG challenge

Decarbonisation challenges

- Strong reliance on natural gas, mostly high temperature
- Process emissions chemically linked to production

Emission sources 2015, EU

- Coke technically required in blast furnace. BUT 1/3rd are process emissions
- Strong reliance on refinery gas
- Strong reliance on natural gas (also as feedstock)
- High temperature limits use of renewables
2. Contribution of the EIB Group

EI lending to industry 2017 – 2019 – contribution to EIB objectives

- Innovation 91%
- Environment 9%
- Other 80%
- Climate Action 20%
3. How to ensure consistency with low carbon goals?

Alignment with decarbonisation roadmaps

- **Demand-side measures**
  - Lower the demand for primary resources by increasing circularity (reuse, recycling, or replacement of products)

- **Energy efficiency**
  - Adapt production equipment to lower energy use per produced volume

- **Electrification of heat**
  - Replace fossil fuel for heating with renewable electricity, e.g., in ethylene production

- **Hydrogen as fuel or feedstock**
  - Replace feedstock or fuel with carbon neutral hydrogen, e.g., in ammonia production

- **Biomass as fuel or feedstock**
  - Replace feedstock or fuel with sustainably produced biomass to reduce CO₂ emissions, e.g., use bio-based feedstock in chemicals production

- **CCS/CCU**
  - Capture the CO₂ emitted and store (CCS) or use (CCU)

- **Other innovation**
  - Innovative processes, e.g., electrochemical production process
  - Non-fossil fuel feedstock change, e.g., change in cement feedstock
4. Reactions from R1

- ordinary Portland clinker cement
- electrification
- green cement
- scrap recycling
- green hydrogen
- blast furnaces
- biobased chemicals
- material efficiency
5. Possible future focus of the EIB Group

**Key principles**

- Decarbonisation options
- Avoid lock-in
- Sector roadmaps
- Economic life
6. Questions for the session

- New industrial capacity?
- Key principles?
- Outside EU?