

Germany's CCS Goals and Cross-Border Collaboration

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1. CCS in Germany

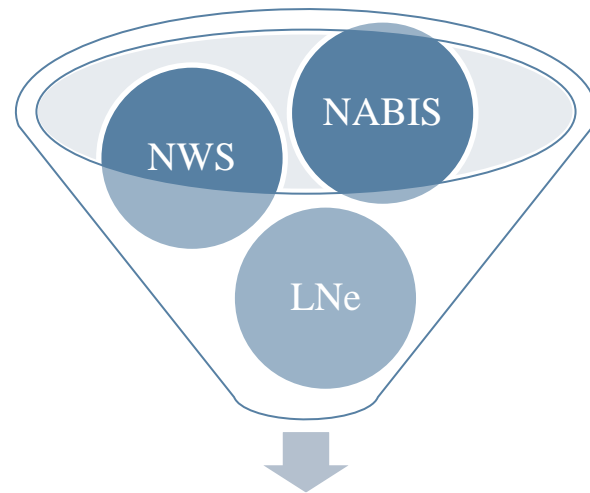
Background

- According to the **Federal Climate Protection Act**, Germany must achieve greenhouse gas neutrality by 2045.
- After 2050, **negative greenhouse gas emissions** are to be achieved.
- The European Union aims to become **climate neutral** by 2050.

Strategic Framework, Overarching Objectives

Interaction of various strategies:

- Industrial Strategy 2030
- National Hydrogen Strategy (NWS)
- Biomass Strategy (NABIS)
- Long-term Negative Emission Strategy(LNe)
- System Development Strategy (SES)
- Circular Economy Strategy (NKWS)
- Lightweight Construction Strategy...



1. **Greenhouse Gas Neutrality** (GHG Neutrality)
2. Comprehensive approach to **the decarbonisation of the economy**
3. Securing **competitiveness**

Concrete Elements for Carbon Management

Interaction of various regulations and strategic documents:

- Amendment of the Carbon Dioxide Storage Act (KSpG) → Cabinet decision on 29.05.2024, currently in parliamentary proceedings
- Key points of a Carbon Management Strategy → Cabinet decision on 29.05.2024
- Comprehensive Carbon Management Strategy → Currently under interdepartmental review within the Federal government
- National funding guidelines for project support (“Federal Funding for Industry and Climate Protection – BIK” and “Climate Protection Contracts – KSV”)

Key Statements from Cabinet Decisions

Key points of the CMS + KSpG Amendment:

- **Avoidance and reduction of CO2 emissions have the highest priority** (inter alia, expansion of renewable energy, ramp-up of hydrogen, phasing out fossil fuels).
- CCS/CCU is a component and necessary in certain areas to achieve **climate goals**.
- Strategic **focus on CO2 emissions from industries** (e.g., cement, lime) and waste management that are currently technically difficult or impossible to avoid.

Key Statements from Cabinet Decisions

- **Removing barriers and creating a clear regulatory framework**, including for the construction of CO2 infrastructure (storage and pipelines) via the KSpG amendment and the London Protocol.
- **Offshore CO2** storage is allowed in Germany's exclusive economic zone, but injection in marine protected areas and an 8 km buffer zone around them is prohibited.
- **No onshore CO2 storage**, but an opt-in clause for Federal states.
- **Exclusion** of CCS/CCU for coal-based power generation or combined heat and power (CHP).

Overview on the Draft Carbon Management Strategy

- **Part A** outlines strategic goals, application areas, and success factors.
- **Part B** includes over 30 measures in six fields of action (CO₂ capture, CO₂ transport, CO₂ utilization, CO₂ storage, CCS as a contribution to negative emissions, market framework and incentive systems for the ramp-up of CCS/CCU), which are necessary to implement CCS/CCU.
- **Part C** introduces additional measures for governance, ensuring continuous involvement of relevant stakeholders throughout the implementation process.

Integration into the EU Framework

- The **EU Industrial Carbon Management Strategy** from February 2024.
 - CCS/CCU is necessary to achieve European climate goals.
 - **Transport infrastructure** is a **key element** for the ramp-up of CCS/CCU.
- Net-Zero Industry Act (NZIA): Goal of CO₂ injection capacity of 50 million tons of CO₂ per year within the EU by 2030.
- Germany is in close cooperation with neighboring EU Member States (Denmark, Netherlands, France, Belgium) and Norway, which are all advancing CCS/CCU.

2. Cross-Border Collaboration

Important PCI/PMI - Projects

- Germany is also supporting (non-financially) various CCS/U projects as part of the Trans-European Networks (TEN-E) Regulation.
- These are Projects of Common Interest (PCI) and Projects of Mutual Interest (PMI) .
- The goal is to foster the development of a European, cross-boarder CO2 infrastructure and thus also support the ramp-up of CCS/U technologies.

PCI/PMI – Projects (Examples)

Bitrost:

Utilisation of existing infrastructure such as depleted gas fields and pipelines for the safe transport and permanent storage of CO₂ in the Danish North Sea, but also plans for a CO₂ pipeline (offshore) in Denmark and in Germany along the Leipzig-Hamburg route.

BaltiCO2Net:

Development of a large cross-border CO₂ transport and storage infrastructure that connects emitters from the EU Baltic Sea region with storage sites in Denmark, which will also benefit German companies.

German Carbon Transport Grid:

Connection of emitters from Germany with storage sites in European countries bordering Germany and thus the connection of the emitters located there and the connection to the currently known and planned CO₂ export options in Northern and Western Germany.



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Thank you!

Any Questions?