



The European Union: World Leader and Standard Setter on Carbon Emissions Reductions

Major Economies and Climate Change Research Group

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EXECUTIVE SUMMARY

This report examines the barriers to greenhouse gas (GHG) emissions reductions within the European Union. While the EU has historically been a world leader in pursuing environmentally friendly policies, it faces a difficult path moving forward. Responsible for just over 11% of global annual CO₂ emissions, the EU is the third largest GHG emitter after the U.S. and China. The EU has seen a slight uptick in emissions following the financial crisis of 2008 and is grappling with both EU-level and member country-level obstacles.

BARRIERS

This report outlines the following barriers to further climate mitigation action.

At the EU level, these include:

- Individual member disagreements, roughly between richer and poorer states.
- Failings in the Emissions Trading System (ETS).
- Conflicts with the imperatives of achieving energy security for some member states.

At the member country level, these include:

- Strong economic and political opposition in Eastern Europe, particularly in Poland, to ambitious climate measures.
- Persistent subsidy and incentive programs.
- A knowledge gap between utilities and oil and gas companies on CCS techniques.

The key sectors analyzed in this report include energy production and transportation due to their large contributions to current and future emissions trajectories. On the demand side, energy efficiency in buildings and industries is also examined.

POLICY RECOMMENDATIONS

A number of different policies could be deployed to overcome these barriers. Some of these should be deployed at the EU-level while others are more relevant to particular states. Policy recommendations are summarized below.

Energy Production - Carbon Capture and Storage (CCS)

In the energy production space and CCS, policy recommendations at both the EU- and country-level are worth pursuing, including:

- *Fund CCS in coal-rich countries such as Poland.* Ensure funding for CCS projects in Poland; this will mitigate the financial barriers to CCS deployment.

The UK should:

- *Reduce risk aversion of utilities over CCS.* Work toward reducing the risk aversion of utilities to invest in CCS. This could take the form of increasing funding to CCS R and D activities in utilities, or providing some sort of insurance mechanism to utility companies should their CCS projects fail.
- *Foster knowledge.* Foster knowledge transfer about CCS projects from the oil and gas industry to the utility industry. This will mitigate some of the technical barriers to CCS

deployment in the UK. Moreover, because production is fairly concentrated (6 utility companies), training and knowledge diffusion should not be as problematic.

Germany should:

- *Educate the public.* Begin an educational public information campaign about the benefits and costs of CCS technology. Doing so might sway public opinion to a more favorable opinion on CCS, especially given Germany's reliance on coal.
- *Engage stakeholders.* Continue to foster an inclusive process of CCS deployment by engaging stakeholders early in the CCS exploration process.

The Emissions Trading System

For the ETS, the EU should enact two key policies:

- *Reduce permits or harmonize national policies.* The EU should either aggressively reduce permits on market, or consider harmonizing national level policies with EU level policies.
- *Stop exemptions.* The EU should stop granting exemptions to some countries and industries. This is politically contentious, but a step toward removing market distortions.

Energy Production – Renewables

In the renewables space, two policies are worthwhile:

- *The UK should step up offshore wind and pursue other renewables.* The UK should continue to pursue renewables and nuclear energy development. It should seek to scale up its burgeoning offshore wind industry.
- *Assist Eastern Europe.* Wealthy EU countries should more aggressively assist Eastern European countries (Poland, in particular) to embrace renewables in lieu of coal-based power. Eastern European countries in particular have enormous potential for scaling up renewable technologies. If economic barriers can be overcome, renewable technologies could make a large contribution toward securing Eastern Europe's energy security.

Transportation

Several policies in the transport space are viable:

- *Continue support for public transport.* Continue to pursue public transport as a primary option in local, intra-state personal travel and freight.
- *Support stricter fuel efficiency standards for vehicles.* Continue policies that incentivize fuel-efficient low-carbon LDV, MDV, and HDV technologies.
- *Share information on demand management.* Disseminate information about success in TDM through outreach and development projects.

Energy Efficiency in Industries and Buildings

Three policy recommendations in energy efficiency are:

- *Eliminate exemption for older buildings.* Eliminate grandfather clauses in EU Building Codes that allow older buildings to exempt themselves from energy efficiency standards.
- *Require mandatory upgrades.* Close the mandatory retrofit and upgrade cycle and require all buildings to make improvements every ten years.
- *Include biofuel minimums for cement production.* Institute mandatory biofuel minimums for cement production, starting at 10% and then scaling up.