

# Public perceptions of CCUS in Central and Eastern Europe – implications for community engagement

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**Abstract.** Carbon capture, utilization, and storage (CCUS) is emerging as a subject of major interest for EU climate policy due to their potential role in avoiding hard-to-abate CO<sub>2</sub> emissions, as well as to lead to “negative emissions” through direct air capture or bioenergy with carbon capture and storage. Despite CCUS technologies being deployed since the 1970s, their widespread implementation is still challenged by a range of factors, including policy inertia, high costs, and relative novelty in the public discourse. In particular, as CCUS emerges slowly into the realm of public and political debate, opinions on these technologies and associated projects are easily changeable and affected by a range of factors, which make concerted public and community engagement extremely important for deploying them where they matter most.

The Central and Eastern Europe (CEE) region is characterized by a higher-than-average economic dependence on heavy industry, old assets and infrastructure, and a high occurrence of regions where the transition to climate neutrality will have a significant impact on local economies, employment, and social welfare [1]. CCUS could play an important role in decarbonizing the heavy industry sectors of the region, particularly given the potentially significant storage capabilities of countries such as Romania and Poland, as well as emerging storage potential in the Black Sea and Eastern Mediterranean Sea. However, climate policy in these jurisdictions is sluggish, and there is a general failure to approach CCUS in a systematic way, with targeted application to sectors where it can have the highest impact, such as cement and oil refining. As a result, the public debate around CCUS is practically non-existent, and where public opinions do emerge, they may be significantly influenced by the context of a particular project and generate significant resistance based on the relationship with project developers, the amplification of perceived risks, and the lack of appropriate explanations of costs, benefits and risks. This in turn can lead to a reticence of political stakeholders to commit to deploying CCUS, causing the public debate to further stagnate and creating a vicious circle whereby opportunities to familiarize the public with these technologies (well in advance of their deployment) are missed.

In order to deploy CCUS at pace and scale, as part of the catching-up climate policies of CEE countries, public perception of CCUS must be thoroughly researched and developed into appropriate guidelines for community engagement by project developers. There is experience in the region – the feasibility study for Romania’s planned Getica CCS demonstrator (subsequently abandoned) included comprehensive research into the perceptions of local communities, and a toolkit for communications around CCUS by project developers. Similarly, learnings from Poland’s failed Belchatow CCS project can serve to re-assess the state of public opinion on CCS, and how the local and national-level contexts for CCUS perceptions interact. The CEE region has significant potential for deploying CCUS, and public perception must be an integral part of planning as the region moves into the key decade of 2030-2040 for implementing large-scale projects.

**Keywords:** carbon capture, carbon storage, carbon utilization, public perception, social acceptance.

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