

New attempt of the implementation of CCS technology in Poland

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Abstract. After 2013 when the PGE Bełchatów demo CCS project was canceled and the EU CCS directive implemented into Polish law (in a way generally obstructing the development of CCS projects in Poland), no significant effects in that field have occurred till 2021. In 2021 the draft of a new law on change of Polish geological and mining law and some other laws (Polish CCS law) was prepared and is being proceeded – it is expected to be accepted soon by the Council of Ministers and then submitted to the Parliament. Generally, the law is to facilitate the development of CCUS technologies in Poland (commercial projects, both onshore and offshore storage in saline aquifers and depleted/depleting hydrocarbon fields – including EHR, no exploration permits/concessions, just storage permits as required by the directive, transport modes). Concurrently, in August/September 2021 Polish Minister of Climate and Environment appointed an advisory board – the Team on Development of CCUS technologies, where representatives of government, industry and research organizations were invited to facilitate CCUS technologies implementation in Poland. One of the Team's tasks resulted in the development of several prefeasibility studies on the full CCS value chain of newly constructed power and CHP blocks (mainly gas fired) carried out by a consortium led by AGH. Similar studies are being developed or considered in the case of other industry sectors, especially cement and chemical plants. In the storage part of these studies, the national project “Assessment of formations and structures for CO₂ geological storage including monitoring plans” (completed in 2012/2013 by a consortium led by PGI-NRI) and its update completed upon request of the Ministry in 2021 have been utilized. In the case of the complete CCS value chain, results of pre-feasibility studies carried out in 2009-2013, together with assumptions and results of the new AGH-important project CCUS.pl initiated in May 2021, have been utilized. Several other international projects (financed by Norway Funds) oriented on CCS/CCS have been started (e.g., Agastor, SltPreCO₂ project) in Poland. These developments might contribute to creating Polish CCS cluster (or clusters) where various emission sources and transport and storage infrastructure will be integrated, possibly within a decade.

Keywords: CCUS (Carbon Capture, Use and Storage), Poland CCUS update, CCS value chain.

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