

**ANALYSIS OF CO<sub>2</sub> SEQUESTRATION PROSPECTS FOR LOWER  
SILESIA POWER PLANTS**

**Janusz Nowak, Jan Kudelko, Dominika Konsencjusz**

*KGHM Cuprum Ltd. – Research and Development Centre, Wrocław, Poland*

The article presents an analysis of sequestration opportunities for carbon dioxide emissions from the future Lower Silesian power plants, with its storage in the geological structures of the region. The concept of Legnica brown coal bed management predicts several variants for opening the resources. In the variants analysed large amounts of discharge gases are produced. Following the (geological, technical and economical) analysis it has been found that the hydrogeological profile of the Sudetian Monocline within the hitherto recognised area offers no opportunity for locating CO<sub>2</sub>-water solution. The area of Polish Lowland seems to be the most suitable area for storing CO<sub>2</sub>, mainly due to its geological structure.

**Literature**

- [1] Geologiczna sekwestracja CO<sub>2</sub>, R. Tarkowski, PAN Krakow, 2005.
- [2] IPCC Special Report on Carbon dioxide Capture and Storage, 2005.
- [3] Bilans zasobow kopalin i wod podziemnych w Polsce, PIG, Warszawa, 2006.
- [4] Wegiel brunatny optymalna oferta energetyczna dla Polski, Z. Kasztelewicz, Red. Górnictwa odkrywkowego, Bogatynia 2007, Wrocław.
- [5] Technologia – sekwestracji i podziemnego lokowania CO<sub>2</sub> ze spalin bloków energetycznych 4x1100 MW elektrowni na złożu Legnica Zachód oraz związane z tym nakłady i koszty, KGHM Cuprum CBR, Wrocław, 2007.