

POLITECHNIKA ŚLĄSKA W GLIWICACH  
WYDZIAŁ GÓRNICTWA I GEOLOGII

*Warunki rozwoju polskiego rynku węgla  
oraz utrzymania jego konkurencyjnej pozycji  
w świetle zmian zachodzących  
na międzynarodowych rynkach  
surowców energetycznych*

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Praca doktorska  
przygotowana pod kierunkiem  
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Gliwice, 2013



Summary of doctoral thesis  
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„The conditions of Polish coal market development  
to maintain its competitive position in view of changes  
occurring in the international energy markets”

The energy security and the prospects of Polish energy market, dominated by domestic coal mining and dependent on oil and gas imports is examined in the doctoral dissertation. Oil and natural gas prices and the risk of its supply disruption were the basis of the analyzes and define its scope. In view of the open trading was not possible to ignore the impact of international energy markets.

To examine the relationship between fuels, time series, correlation and spectral methods were used. Changes in the structure of consumption with seasonal adjustment were identified. It was shown that change in oil prices is clearly leading signal to changes in other fuels prices, and built prices and consumption models can reliable forecasts produced.

The possibility of oil and gas substitution by coal gasification and liquefaction products was included. The probable time of its existence was determined by experts studies, SWOT analysis and scenarios appropriate to the situation. Based on input-output analysis for the Polish economy, and foreseen changes in the fuels consumption structure, the energy structure simulations and assess the substitutability degree has been made, taking into account the impact of imported fuels price changes on domestic prices and the possibility of its substitution with "national" fuels.