
GIS in Coal Transportation Modeling: Case Study of Ohio

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Abstract

In order to reduce SO₂ emissions to less than 2.5 lbs/mBtu as mandated by the Clean Air Act Amendment (CAAA) of 1990, power companies mainly using higher sulfur content coal as fuel supplies have to find their alternatives to reduce SO₂ emissions. The purpose of the study is to assess the extent of economies of scale in coal delivery. The network of coal flow consists of production sites, consumption plants, routes, and costs of coal delivery. GIS as a new tool is used to help identifying and visualizing these routes. Different transportation modes are evaluated under different price schemes. The translog function with price homogeneity restrictions is used to assess the cost structure of the coal delivery system.
