A Study of Household Coal Demand and its Implications for Rural Energy Policies

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Abstract

Household use of coal creates high levels of indoor and outdoor pollution affecting human health and the environment. However, millions of people across northern Asia and some parts of Europe continue using coal for space heating and cooking. As a result, the case of Kazakhstan is of interest because 70% of its rural households use coal for heating. Availability of a relatively large dataset allows for identifying determinants of household coal demand and making policy recommendations. By analyzing Kazakhstan's household budget survey data, we find that lack or limited access to alternative heating systems, low coal prices, and low energy efficiency of the housing stock are the main factors leading to high rates of residential coal use in Kazakhstan. In addition, we find that in the absence of relevant policies, household demand for coal for space heating should be expected to grow with income. As a result, if the government implements policies to increase coal prices, it should introduce concurrent policies that increase access to alternative heating systems and incentivize energy efficiency improvements.

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