ENERGY CRISIS IN THE DEVELOPING COUNTRIES AND MARKETING STRATEGIES FOR THE ILLINOIS BASIN COAL FOR THE 21ST CENTURY

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ABSTRACT

Coal has long been used to create energy, and will play a major role in meeting future energy needs. On a global scale, the demand for energy has increased by about 88% during the last 12 years. It has been predicted that worldwide energy consumption will double by 2020. Alternative energy sources, such as nuclear energy, may not be adequate to meet these anticipated needs. There are abundant coal reserves in the Illinois Basin, but barriers to export markets include the relatively high sulfur content of the coal, and its price when compared with other competitors in the world steam coal market such as South Africa, Australia, Colombia, Poland, and China. It appears that Europe will continue to be the primary international market for Illinois basin coal. New or underdeveloped markets may exist in the developing countries of Asia because of growing economies, and limited alternatives to coal as energy. If the sulfur and ash content of Illinois Basin Coal can be economically reduced then offered at a price that is competitive in the world market, coupled with its stability with respect to supply and other economic incentives, it should be possible to export more coal to these developing markets than is currently possible.

INTRODUCTION

Coal Prospects as a source of Energy: Coal plays a major role in meeting the demand for global energy. It provides about 27% of the global primary energy consumption, and about 40% of the world's electricity is generated from coal (UNWDI, 1999). Coal also has a major role in many parts of the world in developing and improving living standards. Because coal is cost-competitive in the market place, it provides energy at reasonable costs to consumers. Historically, coal was used internationally for the steam–driven transportation after the Industrial Revolution. The energy crisis during the oil embargo of 1973 by OPEC, the political instability in Iran in 1979, and the international sanctions against Iraq and Libya further increased coal trading to new levels because of price increases on petroleum products in the international market. Until recently, steam coal represented about 29 percent of world coal trade (UNWDI, 1999). The increase in price for petroleum products not only increased the demand for coal in the international market, but it also resulted in a search for alternatives to oil resources throughout the world. Hence, such initiatives not only accelerated the exploration technology for coal, but they also increased its production as well. From 1975 to 1976, the production of coal in the U.S. increased by about 4%, and 13,600 people were employed (Dahl and McDonald, 1998). The number of active mines increased from 55 to 62, which further increased to 71active mines in 1979, with a total coal production of 59,538,127 tons (Dahl and McDonald, 1998).

The coal output in Illinois in 1998 was 39,639,334 tons (DNR, 1998). It has been estimated that there is enough coal in Illinois to supply electricity to more than 6 million homes for almost 500 years (Moore, 2000). However, in order to compete in the domestic and international markets, Illinois coal has to meet the requirements for sulfur and ash content, BTU value, and cost. But because of its high sulfur content, Illinois coal may not compete well with the coal from other States in domestic and international markets. The Clean Air Amendments have been particularly challenging to the Illinois Coal industry. To reduce the level of sulfur dioxide emissions, public utilities in traditional Illinois coal markets have often used to low-sulfur western coal. Multiple usage of coal, like its usage in the production of gas, electricity, or metallurgy is expanding. For example, in the United State alone, where 56 percent of all electricity comes from coal, demand for coal-fired electricity will increase by 25 percent by 2010 and the rapid growth is estimated in the Midwest and Southeast, which are traditional Illinois coal market (Moore, 2000). It is expected that the coal demand in Europe will increase by 41 percent by 2010, and demand for energy in Asia should increase coal demand by 82 percent (Moore, 2000). However, environmental restrictions may be partly offset by a growth in demand, particularly by