F I S C A L I M P A C T R E P O R T

SPONSOR Alcon **ORIGINAL DATE** 02/04/14 **LAST UPDATED** 02/11/14 **HM** 30/aHENRC

SHORT TITLE Study Methane From Coal As Fuel **SB**

ANALYST McCoy

ESTIMATED ADDITIONAL OPERATING BUDGET IMPACT (dollars in thousands)

	FY14	FY15	FY16	3 Year Total Cost	Recurring or Nonrecurring	Fund Affected
Total		>$100.0				TBD

(Parenthesis ( ) Indicate Expenditure Decreases)

Relates to HM 31

SOURCES OF INFORMATION
LFC Files

Responses Received From
New Mexico Environment Department (NMED)
Energy, Minerals and Natural Resources Department (EMNRD)
Economic Development Department (EDD)

SUMMARY

Synopsis of HENRC Amendment

The House Energy and Natural Resources Committee amendment to House Memorial 30 adds health and costs to the scope of the requested assessment. The amendment now directs the New Mexico Environment Department (NMED) and the Economic Development Department (EDD) to study the environmental health and benefits and costs of capturing and using the methane lost from coal mines as fuel for electricity generation.

Synopsis of Bill

House Memorial 30 requests the New Mexico Environment Department (NMED) and the New Mexico Economic Development Department (EDD) assess the benefits of refining coal mine methane for use in power plants and report to the appropriate committees of the legislature concerned with the environment and economic development.

FISCAL IMPLICATIONS

HENRC Amendment:
The NMED notes the agency does not have the expertise to evaluate costs; therefore, the agency expects that costs would be studied by the EDD. The NMED is capable of assessing the environmental health of this proposal, but it is unclear which health this refers to. If this requires analysis of public health, the NMED may have to expend additional resources to meet this directive. If this refers to air quality, the NMED can incorporate this with no change to its assessment of the original HM 30.

Original:
The EDD notes, staff time committed to the study cost would vary depending on the amount of information regarding new industry potential and information already available. The EDD acknowledges that precise costs are unknown, but predict a large part of the cost lies in collecting data and information produced by other agencies and industry resources.

The NMED estimates one-half to one full-time equivalent position would be required to perform the analysis necessary to conduct this study. The NMED predicts the length of the study to be two years. Including salary and benefits, the Environment Department estimates the cost of implementing this study at $50,000 per year, for a total of $100,000 for two years.

The agency currently has a vacancy rate of 18.3 percent, a total of 121 vacant positions.

The NMED also notes, the agency could assign the development of this analysis to existing employees who would not be able to complete some of their current workload. Alternatively, the agency would hire an employee to perform this analysis for approximately $100,000. Additionally, depending on the outcome of the analysis, additional legislation and/or regulations may be required to fully implement a methane capture and sale system.

SIGNIFICANT ISSUES

The NMED reports, methane is a powerful greenhouse gas, with a carbon dioxide equivalency of 25 times (that is, methane is 25 times as powerful a greenhouse gas as the same amount of carbon dioxide). According to the U.S. Environmental Protection Agency (EPA), approximately 98 billion cubic feet of methane was vented from coal mines in the U.S. in 2011. Coal deposits often include methane gas, which escapes from the coal during the mining process. For safety purposes, the methane is currently vented through ventilation systems in underground coal mines. The methane emits directly to the air as a result of mining at surface coal mines. The NMED notes, capturing and using this methane would result in a decrease in greenhouse gas emissions in New Mexico, provide an additional revenue stream for coal mines, cause increased operating costs to collect and to refine the gas, and increase mine safety. Coal mines that are or may be regulated by federal requirements for greenhouse gas emissions may be able to avoid these requirements if the methane was captured and sold as product.

The Energy, Minerals and Natural Resources Department (EMNRD) reports, New Mexico has four active coal mines, three of which are surface mines, which would make it difficult to capture coal mine methane. There is one underground mine, the San Juan Mine, which currently captures coal mine methane for worker safety reasons and releases it to the atmosphere. In addition, the San Juan Mine has a natural gas refinery on the south end of the property that could

be utilized and is near a power generation plant. This study would determine if coal mine methane exists in sufficient quantities to sell to utilities for burning in electric power plants. The EMNRD notes, since coal mine methane is currently vented into the atmosphere, capturing and utilizing it would have the added benefit of improving air quality that is regulated by the NMED and the U.S. Environmental Protection agency. Capturing underground coal mine methane is essential in the on-going effort to ensure coal mine worker safety regulated under the Mine Safety Health Act.

The EDD reports, there is a threat of a reduced demand for coal in the four corners region. The Arizona Public Service Company (APS) proposed in 2012 to close the three oldest units at the Four Corners Power Plant, which would reduce capacity from 2,100 to 1,540 megawatts of production. The plan may be on hold while APS negotiates its coal supply contract, which comes from the nearby Navajo Mine operated by BHP Billiton. The San Juan Generating Station has no plans to close any of its units but some have proposed to convert two of its units from coal to natural gas. There is also a reduction in demand for coal-fired electricity, particularly in California. Requirements to improve the emissions of coal-fired generating stations have also decreased demand for coal.

The EDD also reports, methane from coal mines is a lost resource as significant amounts of methane are lost or left unexploited in the coal mining process. Coal, as a valuable energy mineral, supports the regional economy and jobs. In the United States, methane escaping from coal during mining amounts to 10 percent of total methane emissions. Recovery of coal mine methane in advance of mining is seen as an opportunity to reduce methane emissions.

PERFORMANCE IMPLICATIONS

One objective of the NMED's strategic plan for FY 2012-2013 is to improve and protect air quality by decreasing the number of areas that fail to attain the national ambient air quality standards and proactively address air quality where it is degrading. Coal bed methane includes a small portion of volatile organic compounds which are an ozone precursor. Reducing volatile organic compounds could help with reducing ozone concentrations in the region.

COMPANIONSHIP, RELATIONSHIP

HM 30 is a companion to HM 31, which requests that New Mexico Institute of Mining and Technology conduct the same assessment.

OTHER SUBSTANTIVE ISSUES

The U.S. Environmental Protection Agency (EPA) is currently developing rules for the reduction of greenhouse gases from new and existing power plants, including coal fired power plants. Air pollution sources that emit more than 100,000 tons per year of carbon dioxide equivalent are subject to federal permitting requirements. Coal mines that reduce greenhouse gas emissions below this threshold would no longer be subject to these federal requirements. Capture and use of methane from coal mines would reduce overall emissions of greenhouse gases in New Mexico and could be used as an overall reduction for meeting EPA requirements.

WHAT WILL BE THE CONSEQUENCES OF NOT ENACTING THIS BILL

If HM 30 was not passed, it would not be known whether capture and use of coal bed methane from coal mines would be economically viable. The Environment Department would miss the possibility of taking the reduced emissions as a control measure to meet USEPA requirements for reducing greenhouse gases.

AMENDMENTS

The NMED suggests the following amendments:

- An appropriation of $100 thousand to cover the costs of the analysis
- Include the timeframe for reporting the results of the analysis to the legislative committees

MTM/ds:jl