

Rahall Transportation Institute Research Project Description Form

Project Number: RTI TRP 00-06

Project Title: Transportation and Market Feasibility Analysis for Innovative Coal Combustion Byproducts to be Manufactured Adjacent to the I-64 High Tech Corridor in Southern WV

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Project Objective: To determine the transportation challenges and costs that will be necessary for the successful marketing of a coal combustion product proposed for manufacturing adjacent to the newly designated high technology corridor in Southern West Virginia (Rainelle WV, Greenbrier County).

Abstract: A consortium of both public and private entities has developed an innovative program designed to eliminate existing coal waste by combining the waste material with coal and burning the mixture in the production of electricity. In order for the overall project to be financially viable, it must be possible to profitably produce, transport, and market an innovative coal combustion product that is produced through the combination of coal ash and saw dust resulting in a brick that has applications in residential and industrial construction. The project will be demonstrating state of the art technology and has the potential to dramatically affect the local economy through the new long term high tech jobs that will result assuming transportation challenges are resolved. A concurrent endeavor to develop and promote a high technology corridor in the region in addition to land use planning underway in the county must be taken into consideration to maximize the potential impact the project can have on the development of the high tech corridor in the shortest amount of time possible.

Preliminary analysis suggests that demand conditions, production costs, and transportation alternatives combine to form very promising opportunities for the profitable manufacture and distribution of the product (Woodbrick). However, this initial analysis lacks the detail necessary to completely convince all involved constituencies that this favorable outcome will, in fact come to fruition. The following study is proposed to address the additional necessary details.

Task Descriptions: The study will consist of the following components:

Production Cost / Transportation Analysis The study will include a review of existing production cost estimates and a thorough examination of transportation alternatives and associated transportation costs.

Market Definition The study team will use standard economic techniques for defining both the geographic and product dimensions of the relevant market(s) in which woodbrick will be sold. This portion of the analysis will also include an examination of the downstream market(s) for residential and commercial construction within the geographic reach of production facilities located in southern West Virginia.

Market Structure The analysis will include a standard analysis of market structure characteristics for both building material markets and the markets for residential and commercial construction. Relevant characteristics will include, but not necessarily be limited to the number of sellers, degree of product homogeneity or product differentiation, existing or potential barriers to entry and exit, and foreseeable changes in demand conditions.

Construction Cost Comparison The study team will use well accepted methods to assess and compare construction costs using woodbrick with the cost of residential and commercial construction using traditional materials.

New Product Histories To the extent possible, the study team will document the economic histories of new construction products and materials. These histories will then be examined to determine the factors that routinely contribute to new product success (or lack thereof). The analysis will also work to identify temporal patterns in the degree of market penetration.

Synthesis Information from the component parts described thus far will be synthesized to form a qualitatively-based set of conclusions and recommendations regarding the potential to produce, transport, and successfully market woodbrick.

Milestones, Dates, Schedule:

Start Date Jan. 1, 2003:

End Date August 31, 2003

Yearly and Total Budget: Total: \$ 48,000.00

Student Involvement: At least one undergraduate student will assist the full time research staff with data collection and report preparation.

Relationship to Other Research Projects:

TTP 00-12	A Deployment Plan for the WV High Technology Corridor	Dr. Michael Hicks
TRP 00-02	Master Land Use Plans for Six Southern WV Counties	Mr. Bob Plymale

Technology Transfer Activities:

Final report will be published on web and several public meetings will be conducted to transfer findings.

Potential Benefits of this Project: A long term strategy to assist in the diversification of the southern WV economy using assess to the National Highway System as the major physical attribute of the region.

TRB Keywords: Technology Corridors, planning, byways