

MARKET OPPORTUNITIES FOR UTILIZATION OF OHIO FLUE GAS DESULFURIZATION (FGD) AND OTHER COAL COMBUSTION PRODUCTS (CCPs)

Volume 1 – Executive Summary
Volume 2 – Findings, Recommendations, and Conclusions

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ABSTRACT

Ohio generates approximately 10 million tons of Coal Combustion Products (CCPs) annually, and utilizes about 20% of them in various application technologies. The remaining 80% are typically disposed in landfills or surface impoundments. Ohio generates a significant amount of wet FGD material (3.8 million tons) annually to comply with the Clean Air Act Amendments of 1990, which restricted SO₂ emissions from many coal-fired facilities that used high-sulfur coal. Many of these CCPs, if treated and applied properly, can be low-cost substitutes for conventional raw materials in highway and related civil engineering applications, reclamation uses, manufacturing industry, and agricultural applications. The market study presented in this report focuses on CCPs generated in the state of Ohio and their existing and future utilization potential. Potential high volume uses for FGD materials exist in highway and related civil engineering applications throughout the state, reclamation in the eastern third of the state, and wallboard manufacture. High value markets exist for CCP uses in the manufacturing industry. Agricultural uses generally will be low volume and low value uses for the CCP provider. However, they are attractive low cost alternatives that are generating increased interest and demand by the agricultural community. Significant environmental benefits from mine reclamation work can result due to reduction in acid mine drainage and sedimentation problems. The key to the success of CCP utilization will be to maintain and expand the volume of current CCP use application technologies and to develop high volume, high value new innovative uses for FGD and fly ash. The potential large volume utilization of CCPs as raw material substitutes for conventional materials have significant technical benefits, economic advantages for utilities and end users, and environmental as well as social benefits. However, several drawbacks, limitations, and barriers to CCP utilization do exist in the state. The barriers to CCP use in Ohio are regulatory (federal and state), legal, and institutional (economics, marketing, environmental and perception related, and technical). Ten recommendations have been made for the removal / reduction of barriers to CCP utilization. These barriers can be overcome with the synergy and focused attention of government agencies, utility industry, trade organizations, and university research and technology transfer and market development programs. The removal of these barriers and a strong market development program are critical to the future high volume uses of CCPs, particularly FGD and fly ash in the state of Ohio. The long-term successful utilization of CCPs that are technically safe, environmentally sound, socially beneficial, and commercially competitive will allow Ohio coal to remain competitive with other coal sources, and keep the cost of energy production low while protecting human health and the environment.

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