LRC-C (100) A: “Incorporation of Coal and Coal Waste into High-Value Materials”

Submitted by: Semplastics
Request for: $850,000
Total Project Costs: $4,206,633
Principal Investigator: Walter Sherwood and William Easter
Project Duration: 3 years

The proposed project would further the ongoing effort led by Semplastics to integrate coal and coal ash into plastics to make safe and strong building materials. The project would include two efforts focused on 1.) manufacturing with large 3D printers, and 2.) assembling a partial building using coal-based material. The technological target is to provide new improved building materials out of lignite-based resources. The economic impact is to provide additional markets for lignite-based resources. The underlying benefit of the project is to create value-added coal-based products. The total budget is $4.2 million with $850,000 being sought from the North Dakota Industrial Commission. The majority of the money would come from the U.S. Department of Energy with other funds coming from Semplastics as well as other research partners.

Technical Advisor’s Recommendation:

Fund – one of the technical reviewers recommended funding, and two recommended funding may be considered. The proposal received an average score of 178.6 out of 250. The proposed project is a good fit for the Lignite Research Program, as a pursuit of emerging markets for building materials from lignite and ash. The project provides a strong leverage of state funding at roughly 5:1. Semplastics has been asked to provide details of the work scope and a discussion of the lignite focus, in response to reviews. The recommendation is to fund if the LRC is satisfied with the description of the lignite focus, scope of work, and budget in the proposal presentation.

Funding would be subject to the following:

- Technical advisor participates in project reviews
- Technical advisor reviews the project management plan with the project team, including a detailed review of the work scope
- Receipt of the industry and federal matching funds

Conflicts of Interest:
EERC and Letter of support from North American Coal