

**MINUTES**

**AMRCC Alternative Materials & Energy Resources Work Group**

**May 26, 2009**

**Cedar Valley TechWorks**

**Waterloo, Iowa**

**DRAFT**

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**Members Present:** Chair, Sam McCord, MCG BioComposites, LLC; Mike Birkinbine, HNI Corporation; Steve Dust, TechWorks/Greater Cedar Valley Alliance; Cary Darrah, TechWorks; Hailey Jiang, Pella Corporation; Terry L. Johnston, TechWorks; Scott McCoy, Innovative Injection Technologies; Jay Olson, Deere & Company; Dean Reck, MCG BioComposites; Eric Renteria, Green Line Armor; Jeff Rose, University of Northern Iowa; Elliott G. Smith, Iowa Business Council; and, Fred Streicher, University of Iowa.

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**Welcome & Introductions**

Alternative Materials & Energy Resources (AM&ER) Work Group Chair Sam McCord called the meeting to order at 9:45 a.m. Mr. McCord began by reminding AM&ER members that anything discussed in this venue is considered public disclosure and cannot later be held out as proprietary or privileged.

**Approval of Minutes**

This being the first meeting of the AM&ER Work Group, there were no minutes for review and approval.

**Review of Biomass Working Group Effort**

At the request of Chair Sam McCord, Elliott Smith provided a brief historical overview of the Advanced Manufacturing Research & Collaboration Cluster (AMRCC) and what was the Biomass Working Group.

Established in 1999 by the Iowa Business Council, AMRCC is a partnership of Iowa end-product manufacturers and their suppliers. The group promotes the use of advanced engineering processes and manufacturing technologies while conducting collaborative research and sharing best practices. The primary goal of AMRCC is to ensure that Iowa companies remain at the forefront of business trends and innovations by maintaining and improving their competitiveness.

AMRCC has always recognized the importance to Iowa's economy of renewable resources as viable, sustainable substitutes for petroleum- and carbon-based products and fuels. For that reason, it created the Biomass Working Group 5-6 years ago to bring together industry leaders. Meetings were originally focused on sharing best practices, discussing latest technology developments, and developing market strategies. However, in the Spring of 2007 meetings eventually began to lose focus and attendance waned. In

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an effort to conserve financial resources and reconsider group structure, goals, and objectives, a decision was made at that time by the AMRCC Board and Mr. McCord for the Biomass Working Group to go dormant.

The intervening two years have seen a great deal of progress within Iowa in the area of alternative manufacturing materials and renewable energy --- enough to generate a newly constituted and re-energized AMRCC work group focused on an expanded, more diverse industry and academic audience.

### **AM&ER Work Group Initiative**

AM&ER is a consortium of industrial and academic innovators who utilize raw and composite renewable, recyclable, and biodegradable materials in commercial products and energy consumption. A goal of this group will be to make Iowa a leader in alternative materials and renewable energy resource research, engineering, development, and production.

Sam McCord led the group in a discussion exploring the perceived needs and issues of end-product manufacturers vis-à-vis alternative materials and energy resources development. Consensus formed around the need to establish definitions for common bio-related terms. For example:

- **Biodegradable** – material that will break down with the proper applications of heat, water, etc.
- **Bio-based** – a product can be considered produced with bio-based material if plant matter in the item has a useful life of ten years or less, e.g., soybeans, corn cobs, and makes-up at least 10% of the product's composition.
- **Bio-composite** – base resin that has bio-material added to it, e.g., dried distillers grain (DDG), kenaf, switch grass.
- **Green movement** – producing new products that help reduce the waste stream and developing energy systems that utilize renewable resources.

Other areas were identified as being important for this Work Group to emphasize:

- **Commercialization** – how best to take emerging research, technology, and/or product development to scale.
- **Information sharing & documentation** – encouraging this in a manner that benefits the group while protecting proprietary concerns.
- **Convergence of best practices** – encouraging this in a manner that benefits the group while protecting proprietary concerns.

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## **TechWorks**

**Cary Darrah** and **Steve Dust** made a brief presentation describing Cedar Valley TechWorks, a former Deere & Company property in Waterloo that is in the process of a multi-year, multi-million dollar conversion into bio-based technology, commercialization, and manufacturing center. TechWorks, the concept and business plan for which first emerged in 2002, has four segments in various phases of development:

- **TechWorks Technology Center** – seeks to ensure the availability and quality of a knowledgeable workforce and provide a venue for public- and private-sector research and development while serving as a statewide focal point for industry education and workforce training.
- **TechWorks Manufacturing Cluster** – will offer facilities and outreach programs to incent the commercialization of new products and private-sector businesses.
- **Ag Exhibit Center** – expects to capitalize on the growing interest surrounding ag-heritage tourism while also educating the public on the uses and benefits of bio-based products.
- **Distributed Renewable Energy Pilot Project** – a facility that will showcase the power production capabilities of waste biomass feedstock, demonstrate the attendant energy savings for industrial users, and administer energy system training programs.

The TechWorks campus sits on 40 acres with 300,000 square feet of office, laboratory, and exhibit space in two existing buildings. Public and private sector partners include Deere & Company, the university of Northern Iowa, Hawkeye Community College, the Iowa Department of Economic Development, and the City of Waterloo.

AM&ER meeting attendees suggested that TechWorks consider approaching K-12 school children about careers in engineering and help coordinate internship opportunities with Iowa companies. Emphasis should also be placed on the broad variety of natural resources Iowa has and how best they can be utilized in manufacturing operations, energy consumption, and food processing. Similar statewide efforts were identified in Ohio and Wisconsin.

Mr. Dust was receptive to the idea that members of the AM&ER Work Group could serve, either in total or in part, as some sort of TechWorks advisory council or steering committee.

## **Moving Forward**

**Sam McCord** opened the floor to thoughts and ideas regarding how this new AM&ER Work Group can move forward in a manner that best serves the needs and interests of the growing bio-economy in Iowa.

**Eric Renteria** stated that business needs a resource to assist with comprehensive bio-based process development, from product concept to roll-out. This would include details such as environmental impact research, material specification, and product testing that leads to the creation of a standard data set. **Mike Birkinbine** agreed with that assessment.

**Hailey Jiang** seeks assistance with product trial, internal waste stream elimination, and technical support, e.g., performance verification, dealing with regulatory burdens, and establishing

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certification processes.

**Jay Olson** identified addressing the intellectual property aspects of bio-business process and product development, possibly recruiting retired executives to assist, e.g., SCORE.

**Scott McCoy** suggested that this Work Group should not only emphasize 'Going Green' but also 'Going Iowa,' reinforcing the notion that the state has many varied natural, renewable resources of which to take advantage.

**Mr. McCord** urged meeting attendees to think of other public- and private-sector bio-business individuals who would be good to approach re: AM&ER Work Group membership.

**Next meeting date**

The next meeting of the AMRCC Alternative Materials & Energy Resources Work Group is scheduled to convene at 9:30 a.m. on Wednesday, July 8, 2009 at Cedar Valley TechWorks in Waterloo, Iowa. A meeting agenda will be distributed in advance.

**Adjournment**

With no further business to come before the AMRCC Alternative Materials & Energy Resources Work Group, Sam McCord entertained a motion that the meeting adjourn. By group consensus, the meeting was adjourned by Mr. McCord at 12:21 p.m.

Respectfully submitted,  
Elliott G. Smith

6.9.09

***Upcoming Meeting***

***July 8, 2009***

***9:30 a.m.***

***Cedar Valley TechWorks, Waterloo***