

Day 2 Report—Breakout Group: Biochem

Top Advancement Activities Recommended by Group:

- 1. Create of Cross-Platform Development Incubator**
 - An incubator facilitates partnerships and leverages existing infrastructure.
- 2. Underwrite Activities Leading to Investor Confidence**
 - Creating a model for successful technology-to-market deployment.
- 3. Establish a New Standard for Critical Review**
 - DOE/BETO need to set a standard for critical review of current state of technology and abandon “N th plant” economics; have industry credible economic reviews that include process reliability and robustness evaluation.

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Top Advancement Activities Recommended by Group:

4. Co-Products

- DOE to support the technology development of co-production (i.e. biofuels and biochemicals) on a “scalable” platform, showing economic viability and ultimately establishing industry partners for commercial implementation.

5. Building on Corn Ethanol Infrastructure

- Commodity sugar platform to reduce risk for new biofuel production; Leverage existing know how to create new market opportunities for ethanol based on corn ethanol industry; Use CO₂ and Lignin to produce new fuels.

6. Technology Robustness

- Establish and enforce metrics around industrial robustness of novel organisms, enzymes and/or processes; for the purpose of commercial validation

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Key Reflections By Group Day 1 and 2:

- The corn to ethanol story provides good lessons for commercializing other feedstocks into products.
- There is still a lot of knowledge transfer and coordination work needed to make the biochem processes commercially viable.
- Capture the entire carbon footprint of the replacement product/process and compare that with the existing product/process.
- We need to develop a common techno-economic analysis which are reviewed by industry.
- Pleasantly surprised about the realism in the room, acknowledging the real challenges that we have to overcome.