



## What are the actual risks in cellulosic biofuel development and operations?

a.k.a “The U.S. cellulosic biofuels industry: Expert views on commercialization drivers and barriers.”

Ecostrat, Inc.  
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### Rating

# 8

- 8 Ability to Reduce Project Risk
- 7 Ability to Lower Project Debt Cost
- 9 Ease of Implementation

### Recommendation

There has been an increasing interest in cellulosic biofuels. However, developers are struggling to control development and operational risks. This makes it difficult for companies to attract financing. Understanding what risks should be prioritized in the planning stages of a project is highly important.

This paper prioritizes risk categories in cellulosic biofuel development and operations based on a structured survey process of 228 industry experts. The results of this research will be useful to cellulosic biofuel developers and investors/lenders, whose goal it is to understand and prioritize developmental and operational risks.

### In this summary, you will learn

- An objective ranking of cellulosic biofuel development risks (barriers)
- A quantitative weighting system of assessing project risks based on risk ranking

### Summary

Second generation (cellulosic) biofuels have been gaining increasing interest among biofuel developers and investors/lenders. However, wide commercialization of cellulosic biofuels has not materialized yet. One of the main reasons for this situation is the lack of understanding of risks associated with cellulosic biofuel development and operations. This lack of risk understanding compromises the planning process and stifles investment into these projects.

This study surveyed 228 cellulosic biofuel industry experts with various backgrounds (categorized into feedstock, processing, econ/business, and sustainability). The researchers asked the experts to rate the barriers to the development and success of cellulosic biofuel projects. The research concludes that the top four risks in second generation biofuels are high production costs, policy uncertainty, competition with petro-fuels, and feedstock costs.

These are important findings as they illustrate perceived risks in cellulosic biofuel development in an objective manner. Often developers fall into a trap of considering only some of the risks from a particular perspective. For example, a developer may focus on technology and market risks, while ignoring feedstock and policy risks. This research provides an opportunity to look at cellulosic biofuel risks more objectively, applying quantitative weighting to their importance.

*“Government policies were rated as the most important driver for the commercialization of cellulosic biofuels.”*

*“Ranking of scale-up factors can be influenced by an individual’s expertise and knowledge.”*

To discuss how you can use the concepts in this paper or to receive a copy of the paper, please contact us:

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