

Policy and Law Section Assignment

Due by April 8th at 4 pm

Please email your group's assignment to Sasha (sharrislovett@berkeley.edu) and Marty (marty_m@berkeley.edu) as a Word (.doc or .docx) document

Write a 3-5 page essay (single spaced) in which you:

- **Summarize the environmental law and land policy issues that affect the production of your biofuel across the life cycle (if at all).**
 - For example: Will your biofuel production require the building of a biorefinery and therefore call for local government planning permits and state government pollution control approvals? Will your bioenergy production lead to air and water emissions that will require permits under federal and/or state environmental laws? You can use a hypothetical facility or site, perhaps in California, to help make your analysis more concrete. Pay attention to the possibility of environmental justice risks that your technology may cause even if you comply with the existing law (e.g., is your technology potentially going to cause disproportionate pollution exposures for rural populations? Will this technology create new employment opportunities for poor communities?).
- **Determine how your biofuel technology will be treated under current toxicity rules (both TSCA and REACH), if at all.**
 - For example: Are you obliged under TSCA to seek a pre-manufacture notice for your biofuel, and if so, what details does your company need to submit? If your production process includes microbes, does your company need to have the microbe approved, and what do you need to do to seek this approval? Evaluate the burden of proof that your company will face under TSCA and REACH respectively. Based on the hazard profile for your technology, evaluate whether its toxicity regulation is lacking or should be improved, from a public ethics standpoint. What reasons would you give for shifting the burden of proof to industry, for instance?
- **Evaluate the likely climate change effects of your biofuel, and discuss how your biofuel or bioenergy technology will be treated under climate-related rules, if at all.**

- For example: calculate the rough carbon intensity of your biofuel, or estimate the net greenhouse gas emission reductions (or increases) for your biofuel or bioenergy technology. You should be able to use your life cycle calculations from earlier in the course. You should try to see how your technology compares with fossil fuels. Then either check to see if your biofuel or bioenergy comes under the federal Renewable Fuel Standard and California Low Carbon Fuel Standard and your company can therefore meet these rules; or see if your biofuel or bioenergy qualifies for carbon credits under existing emission trading programs and Renewable Energy Portfolio standards, and therefore can generate revenues for your company; or both. If not, analyze whether your company can still seek inclusion in the rules (e.g., you can apply to the US EPA to qualify your biofuel for the Renewable Fuel Standard). In addition, analyze any greenhouse gas emissions that may come from producing your feedstock, especially any indirect land use change impacts, and see whether changing how your feedstock is produced may affect the GHG profile of your technology.
- **Describe the current and projected scale of your bioenergy or biofuel technology. Discuss how changes in policy could effect adoption of your technology at various scales of operation, and predict how expanding capacities and scales will influence the policy response to this technology.**
 - For example, explain what the level of commercialization and production output exists for your bioenergy or biofuel, and what you think should be the desirable level to achieve greater scales of economy while maintaining sustainable outcomes. How would “scaling up” your bioenergy technology expose your company to different sets of laws and policies at federal level or across the country (or even the planet)? Will expanding your production mean increased pressures on policy-makers to introduce new environmental and health rules?
- **Forecast the policy and law changes that would help make your biofuel technology more marketable and/or sustainable.**
 - For example, if you find that your bioenergy technology currently cannot readily generate carbon credits, what policy changes will enable your company to do so? If your technology

has hazardous components or chemicals, what would allow your company to reduce or eliminate these?

Your essay should include a minimum of five references (readings from the class are fair game). Please include references as a footnote or endnote. Feel free to support your essay with tables or graphs if you would like (optional). Clear writing and good organization are important!