Below are my general impressions (written very informally) for how the overall project as well as the individual activities went the first and second times I included the project in my course.

**First time – A’16**

I was excited to run the project for the first time, but I didn’t convey that excitement well to the students. My lack of project introduction in class, and lack of using lecture time to revisit the project made it feel a bit ancillary. While the overall project went well, and the students were able to practice the 3D particle equilibrium technical skills, many weren’t as excited as I expected. There were many groups who met the project criteria, but few who went above and beyond.

During the hands on session students were asked to think broadly about technical aspects of the problem, and not the social elements. Students developed a sense of how the wind forces acting on the balloons made tensions increase and decrease in different cables.

Students were asked to develop a pitch poster to the community which explained how the balloon anchoring would work and it’s costs. This deliverables structure resulted in all calculations displayed on the pitch posters. This lessened the “value added” in the poster development process as the posters became more of a display of calculations.

Overall, my impression was that students enjoyed the project, but were not especially excited about the work they were doing.

**Second time – A’17**

The second time around I did a better job motivating the project for students. I also gave the students more opportunity to be creative and develop their own ideas by having them scope the elements that they would power within the community. Students seemed much more engaged during the project. They asked many more questions about both the social and technical aspects of the project. Additionally, this time around they were much more willing to look beyond the assigned zones. Rather than accepting a social impact score within a zone, they thought about how they could reduce the impact in that zone once they had more revenue from the sales of energy from the turbine.

While the project was successful the first time around, the second time around was much more engaging. Student excitement was much higher and they were more engaged.

One change that I will make before running the project again will be to have the students read or respond to something in the project description to ensure that they have read all of the content before their hands on activity. This year, during the hands on activity, they were asked to think about the stakeholders in the different zones. However, many of the students had not spent much time working on the project at this time, so there was too much time spent at this hands on station with them becoming familiar with who the stakeholders were. Some additional preparation should enhance the effectiveness of this activity.

My impression of this year’s learning included both students ability to analyze 3D equilibrium systems and synthesize and analyze the conflicting interests of different groups. Students were thinking more deeply about the actual scenarios within the zones rather than only the social impact score that I assigned. Requiring students to think about the social impact within the zones and synthesize that with their impressions of the social impact of the things they choose to power made them think about the ways in which construction would affect people.