Homework Four

Physics and Math of Sustainable Energy

College of the Atlantic

Due Friday, January 29, 2021

Part 1: Edfinity. Do Homework 04 which you will find on your edfinity account. I recommend doing the edfinity part of the homework first. This will enable you to benefit edfinity's instant feedback before you do part two.

Part 2: Problems from the Textbook/Discussion Section. Here are some instructions for how to submit this part of the assignment.

- Do the problems by hand using pencil (or pen) and paper. There is no need to type of this assignment.

- Make a pdf scan of your work using genius scan or some similar scanning app. Please make the homework into a single pdf, not multiple pdfs.

- Submit the assignment on google classroom. Please don't email it to me. (Between my two classes I will be receiving over 40 assignments a week. Keeping track of them all in email is challenging.)

- If you want, you can do all the problems in pairs and hand in only one set of solutions.

- If you work with someone else and they submit the solutions, it would be helpful for me if you submitted the assignment (without an attachment) on google classroom and mentioned who you worked with. Thanks.

IMPORTANT!! Be sure you have the most current version of the textbook. Go the webpage and do a hard refresh! Sorry for yelling.

From the Tuesday Discussion Section Turn in the exercises from Tuesday's discussion section. The link to this assignment is here: `http://hornacek.coa.edu/dave/Teaching/Energy.W21/pdf/wind_lab.pdf`.

From Chapter 12

1. 12.9
2. 12.10
3. Optional: 12.15–12.18. This problem leads you through a derivation of the Betz limit. Requires some intro physics and a little bit of differential calculus at the end.