

# Homework Three

## Physics and Math of Sustainable Energy

### College of the Atlantic

Due Friday, October 3, 2025

There are two parts to this assignment.

**Part 1: WeBWorK.** Do Homework 03 which you will find the WeBWorK page here: <https://webwork-hosting.runestone.academy/webwork2/coa-feldman-es1056i-fall2025> I recommend doing the WeBWorK part of the homework first. This will enable you to benefit WeBWorK's instant feedback before you do part two.

**Part 2: Problems from the Textbook.** 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 this assignment.
- If you like working on a tablet, go for it.
- 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 around 60 assignments a week. Keeping track of them all in email is challenging.)

The problems you should do are from **Chapter 18 and Appendix C** of the book:

#### Chapter 18

1. 18.14
2. **Optional:** 18-15–18.18. These problems lead you through a derivation of the Betz Limit. Recommended for folks who want a modest physics/math challenge. (Disrecommended for everyone else.)

#### Appendix C

1. C.10
2. C.11

Information about how to access the book is on the pinned post on google classroom.