

Calvin College Carbon Emissions Trading Simulation (CETS v2.0)

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BIOL354b and ENGR333a
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As in the previous simulation, you will participate in a small and simulated carbon market consisting of students in BIOL354b and ENGR333 and the professors of the two classes. You will track your carbon emission behavior during the simulation and trade credits amongst yourselves. **All credit/cash activity will be tracked online.** Go to <http://docs.daekem.com> to log in. Your username is the same as for your Calvin accounts and your first-time password is simply your last name. If your last name is less than six characters long, your password is your entire name (e.g. Prof Heun logged in as mkh2 with the password “mattheun”). You will be prompted to set a new password the first time you logon. If you have any problems, contact Brian Medema (bjm4) to get a new password. Use <http://docs.daekem.com> to record daily totals. You are the only person able to view or edit your personal spreadsheet on <http://docs.daekem.com>. The common spreadsheet, with charts on the second tab, can be viewed (but not edited) by everyone. Feel free to format your personal spreadsheet, but DO NOT change the contents of the cells. Doing so will cause errors in the Class View spreadsheet. You may use the provided Excel spreadsheet to track individual activities to arrive at your daily total.

In this simulation you will be charged carbon credits on a mass basis. One carbon credit is worth half a pound of CO₂ emitted. The activities that you must consider are shown below in Table 1. Note that items with a negative credit cost are ways to create credits by participating in sequestration or CO₂ emissions saving activities. You can consume or sell those credits on the market. These credit-generating activities are paid out once per activity. Installing a fluorescent light gets you 10 credits total for the simulation, NOT 10 credits per day. You must submit evidence to your professor that your credit-generating project is complete. (Before and after pictures with a receipt showing purchase of the fluorescent bulbs or tree are sufficient.)

If you embark upon an emissions saving activity and sell the credits you generate on the market, you are allowed to recoup the cost of light bulbs or trees. You must donate your profit (revenue from selling credit less the cost of the bulbs or trees) to the pizza party.

An allotment of 1600 credits has been given to every participant in the market. This amount is designed to be tight but doable.

Table 1: Carbon Credit Equivalence of Market Participant Activities.

Credit Cost	Activity
40	Consume 1 gallon of unleaded gas in a car (20 credits if you carpool)
1	Watch TV (2 hr)
1	Play video game (1 hr. includes having TV on)
80	Operate AC (1 day)
40	Operate Furnace (1 day)
4	Eat a piece of fruit from outside Michigan
40	Eat meat (1 lb beef)
1	Use or leave a computer on (2 hr)
12	50 lbs trash

14	Machine dry clothes
-10	Install fluorescent light bulbs (saved per light bulb)
-100	Plant a tree (2 ft tall) linear scale: 1 ft = -50 credits

The only penalty for illegal market behavior during this simulation is your grade. Thus, the Christian virtue of honesty will be required from all of us to make this simulation successful.

You must use your own money to purchase credits on the market (from another participant) should you need them. Each participant is required to submit an accounting of your activities and the money you spent (to buy credits) or earned (from selling credits) in the market via the online spreadsheets that have been set up for you. Version 2 of the simulation will run from 9 October through 20 November (first day of final presentations for the Calvin College Carbon Neutrality project). Again, the monetary winners will be responsible for providing pizza lunch to the market participants on 20 November. So, save the money that you accrue in the market.