

CGC's Low Carbon Diet

Here are some of the steps we've already taken to reduce our carbon footprint:

Energy Efficiency:

Our planet is entering a phase of "extreme energy," where new sources of energy are harder to extract, and exact more environmental damage (see BP's Gulf oil spill and coal companies' mountain top removal). So despite the sneering by some politicians, energy conservation is more than just a private virtue, it is a communal necessity.

We at CGC have always been mindful of conserving energy. Some things we've been doing:

- we have an on-demand water system, so we heat only the water we use
- our water pipes are super-insulated, so the water stays hot as it moves
- we use energy saving light bulbs and fixtures
- we replaced our inefficient refrigerators (a huge energy hog) with energy-star units
- we super-insulated the attics in the Farmhouse and the commercial kitchen, and the Farmhouse basement, to help with heating and cooling
- we replaced windows and used caulking and weather stripping to keep heat from escaping our buildings
- we compost, recycle and carpool, buy local produce and favor local goods and services

Energy from the sun

We now produce over 100% of our electrical power on site with our eight solar trackers. The trackers are 30% more efficient than roof-mounted solar panels, since they rotate to capture the sun's rays.

Our three older trackers operate on a single axis, moving east to west during the day, but have to be reset twice each year to account for the seasonal shifts of the sun's position in the sky. The five newer trackers operate on a dual axis, and are set by GPS. The new trackers are always perfectly set to follow the sun as it moves each day and each season; they never show the kind of "solar anarchy" you'll see in the older trackers on a cloudy day.

The five newer trackers are owned by AllEarth Renewables, from whom we purchase the power they generate. We sell what we don't use to the power company, and it is then available to our immediate neighbors. This kind of local generation of power is much more efficient, because the energy doesn't have to travel far before it is used. By contrast, only about 35% of the energy produced with centrally-generated power is available for use – the rest is lost in transmission. AllEarth devised a great program to bring solar energy to local users, taking advantage of state and federal tax incentives. Sadly, some of these will be expiring this year. Let's lobby to have them extended and strengthened!

Farmhouse fuel

We use a blend of 99% biofuels to heat the Farmhouse winter office. This coming year, we plan to replace our oil burner with a more efficient unit so we will burn less fuel and even less oil.

Participation in Middlebury Unplugged, a program of the Vermont Community Foundation

Middlebury Unplugged encourages local organizations to be mindful of their energy use. We now have small monitors in the farmhouse and dining hall, so we can track our energy use in real time. We have also committed to reducing our carbon footprint even further. Three steps we are contemplating:

- purchasing a lawnmower that runs on biodiesel instead of oil
- using sheep (which run on grass) to help with lawn care
- encouraging our camp community to go on a low carbon diet!

Frequently Asked Questions About Carbon Reduction

Why should I reduce my carbon footprint? Isn't global warming a liberal myth, debunked by some snarky e-mails in England?

As Nobel Prize winner Paul Krugman recently noted, "Every piece of valid evidence — long-term temperature averages that smooth out year-to-year fluctuations, Arctic sea ice volume, melting of glaciers, the ratio of record highs to record lows — points to a continuing, and quite possibly accelerating, rise in global temperatures." Global warming will displace millions of people world-wide as sea levels rise. It is already wreaking havoc, causing more severe storms and serious drought, and disrupting century-old living patterns in many countries. Many species are in danger of extinction as their habitats warm and their food sources change.

Well, you don't have any Nobel Prize (and Krugman's was for economics). I still have my doubts.

There are two excellent books we can recommend. [Field Notes from a Catastrophe](#), by Elizabeth Kolbert (a writer for the New Yorker and no relation to Stephen) painstakingly details the signs and effects of global warming. And Middlebury College professor Bill McKibben's recent book [Eaarth](#) should scare the pants off you.

Okay, I'm a little scared and feel bad about the possibility of species extinction, but I really don't feel like inconveniencing myself. My landlord won't let me put a solar tracker on our apartment building. Riding my bike and walking – puhlease! And I look really dorky in a sweater.

There are many simple steps you can take to reduce your use of carbon-based energy. Many of them require little effort. Some will result in actual savings on your energy bill – more money in your pocket. And some might actually feel like improvements – cloth bags have it all over those plastic bags you can never get rid of. One good place to find simple suggestions on what you can do is [Low Carbon Diet: A 30 day program to lose 5000 pounds](#). As luck would have it, it is available for sale in the camp bookstore.

Fine, I'll make some changes. But how can my small individual actions really make a difference, when we are really headed for planetary destruction?

Supplementing your individual actions with work in your community can help. See whether you can encourage your school to switch to a renewable fuel source like wood chips. Make sure your Senators and Congressmen know this is an important issue for you. Look to the website stopglobalwarming.com for more ideas. Good luck!

Some simple things you can do to reduce your carbon footprint

Use the cold water wash option whenever possible, and you'll save 85% of the energy consumed by a hot water load.

Separate loads for fast and slow drying clothes and use moisture or automatic settings instead of the timer. Consider hang drying slow drying items like towels and jeans.

Use a front-loading washer. Front loaders are gentler on clothes and use up to 36% less water and 60% less energy than top loaders.

Look for the *Energy Star* label when shopping for new equipment, like refrigerators and washing machines. This indicates machines that use less power and/or water

Resist the temptation to open the oven door to check your food. That can lower temperatures inside by 25°-50°. Turn the oven off a few minutes before the timer sounds and let residual heat finish the job.

Use your microwave and toaster oven to reheat food. Cooking a typical casserole in an electric oven uses about two kWh worth of electricity. The same dish in a microwave oven uses just 0.36 kWh. Toaster ovens are another efficient option.

Cover stove-top pots to stop heat from escaping. This can reduce the energy required for cooking by up to two-thirds. Turn off the heat a few minutes early and use residual heat.

Bring your own cloth bags when shopping and buy items with less packaging. Reusable water bottles cut back on the mountains of waste, and decrease your use of petroleum-based plastic.

Reduce showering time to five minutes or less. For each household member who reduces shower time, you can save 300 lbs of carbon per year.

Set your thermostat to 65 – 68 degrees in the day (and wear a sweater) and 55 – 58 at night. This will save about 1400 pounds of carbon emissions each year.

Learn some ways to reduce gas consumption when you drive your car.

- Eliminate unnecessary weight – you lose 1% fuel efficiency for every extra 100 pounds
- 55 mph is the most fuel efficient highway speed; it'll save 20 – 30% in fuel consumption compared to going 75 (and keep points off your license)
- Regularly service your car and maintain tire pressure, for a savings of 1500 pounds of carbon/year

Eliminate meat from your diet at least one day/week. This will save 700 pounds of carbon/year. Buying food locally in season cuts down on the miles logged by your dinner, and supports local farmers.

Carpool when possible, especially at camp. This will also reduce the energy needed to make our neighbors feel happy we are here.

Share your suggestions by writing them down on the suggestion pad in the dining hall.

Introducing Our New Eco-friendly Lodge

We are excited about the new Lodge that is under construction where the mobile home once stood. It will be available for campers during our programs and for rentals during the rest of the year.

There's a lot to like in the new lodge

Here are some features you may enjoy:

- Of the eight bedrooms available
 - four rooms can accommodate up to four people each,
 - one larger room will hold six
 - three smaller rooms will hold two to three people each.
 - two of the smaller rooms can be connected to form a two room suite
- Many of the rooms have stunning mountain views
- The south-facing rooms will have a front porch to sit on
- Each of the rooms will have electrical outlets and lamps
- Seven of the rooms have a private bathroom, complete with shower. Two of the smaller bedrooms can share a bathroom, becoming a two room suite.
- The rooms will be soundproofed to a degree exceeding hotel standards.
- The common room will have a wood stove and small kitchenette, and will be available to all campers.
- The utility room will have a washer and dryer, available to all campers.

The new lodge is earth-friendly

What makes this building unique is the conscious design for low energy usage. This is accomplished by:

- Skylights, clerestory windows and solar tubes, to provide natural light in all rooms
- A "living roof" covered with grass and wildflowers, providing natural insulation while helping the building blend into the landscape
- Photovoltaic panels on the roof of the common room, for solar hot water and heat
- Natural cooling in the bedrooms, with opportunities for venting out hot air
- Polished concrete floors, for efficient heating and cooling
- For off-season use, efficient radiant floor heat
- An option to heat with a wood stove, for renewable energy
- Electricity produced by the sun

The new lodge uses natural resources from our property

There is a special feel even in the not-quite-completed lodge, likely because we put an emphasis on using natural materials found on site.

- Most of the large support beams, decking, and outdoor siding were sawn from hemlock and pine from the CGC forest.
- Each guestroom will feature finish details fashioned from different tree species harvested on site: ash, birch, beech, oak and pine.
- The red maple from our woods will be used for the common room flooring.
- The stones used around the outside base of the common room were found on site, mostly from the excavation of the pond. Other larger stones found on site will be used for decorative details.