

# Maine Interfaith Climate Change Initiative For Faith Communities

Presented by the Maine Council of Churches

## HOW YOU CAN REDUCE CO<sub>2</sub> EMISSIONS WORKSHEET

Kyoto Goal: Save 1500 pounds of carbon dioxide emissions *per person*.  
UU Church of Saco & Biddeford Goal: Have 25 households participate in this initiative.

The worksheet will help you to calculate your energy savings.  
Together we can reduce harmful greenhouse gas emissions.

Because the worksheet talks about your home and appliances, it makes sense to do this worksheet on a household basis. If you live by yourself and choose to reach the Kyoto goal you will want to cut carbon dioxide emissions by at least 1500 pounds. If there are two in the household, your goal would be 3000 pounds; 4500 pounds for 3; 6000 pounds for 4, and so on.

### *How to participate --*

**1) Look through** the following lists and see where you can make permanent changes that will cut down on carbon dioxide emissions. Information in the worksheet came from US EPA, the Environmental Defense Fund, the Children's Earth Fund, the National Audubon Society and the Co-Op American Quarterly and gives current best *estimates* on average carbon dioxide emissions.

Give yourself credit for those savings you have instituted since 1990 and continue to practice, as you are already yielding reductions from the average Maine per capita CO<sub>2</sub> emissions.

**2) Add up** your totals at the end of each section, and total them on the back page. Can you save 1500 pounds of carbon dioxide per person? Every reduction in carbon dioxide emissions is a help!!

**3) Tell us** how much you pledge to save. If we don't hear from you, one of us will call and offer to assist with the worksheet. Then, we'll add your pledge to our GLOBAL WARMING TREE. Working together we'll reach our church's goal and make progress in reducing global warming. And you may even save money in the process.

If you have questions or want help filling out this form, you can contact Don Horton, Caryl Everett or Randa Thomas. (Contact information is on the back page.) We'll be glad to assist! We can also direct you to more information on global warming.



THANK YOU FOR PARTICIPATING !  
THANK YOU FOR HELPING TO REDUCE GLOBAL WARMING !



## 1. ELECTRICITY SIMPLICITY

Hint: One option is to purchase Green Power for your home's electricity. Green Power is electricity that is generated from renewable sources such as solar, wind, hydro, geothermal, or biomass. Although the costs may be slightly higher, you'll know you are buying power from an environmentally friendly source. (See information on Maine Interfaith Power & Light Company, a green power purchasing group, at [www.maineCouncilofChurches.org](http://www.maineCouncilofChurches.org)).

- a. Replace a 100-watt incandescent bulb with a 27-watt compact fluorescent bulb...  
SAVE 160 pounds per bulb \_\_\_\_\_
- b. Replace a 75-watt incandescent bulb with an 18-watt compact fluorescent bulb...  
SAVE 120 pounds per bulb \_\_\_\_\_
- c. Lights out when we leave a room...  
SAVE 120 pounds per room \_\_\_\_\_
- Subtotal CO<sub>2</sub> saved: \_\_\_\_\_

## 2. HOT WATER USEAGE

- a. Give our water heater a warm-up jacket of insulation to make it more efficient. We use:  
Electric..... SAVE 660 pounds \_\_\_\_\_  
Oil..... SAVE 360 pounds \_\_\_\_\_  
Gas..... SAVE 260 pounds \_\_\_\_\_
- b. Cool the hot-water heater down by 10 degrees (but not below 120 degrees Fahrenheit)...  
Electric..... SAVE 660 pounds \_\_\_\_\_  
Oil..... SAVE 400 pounds \_\_\_\_\_  
Gas..... SAVE 290 pounds \_\_\_\_\_
- c. Chill out our washing machine by doing four out of five laundry loads in cold water...  
Electric..... SAVE 460 pounds \_\_\_\_\_  
Oil..... SAVE 280 pounds \_\_\_\_\_  
Gas..... SAVE 200 pounds \_\_\_\_\_
- d. Make our hot water go further with low-flow showerheads...  
Electric..... SAVE 920 pounds \_\_\_\_\_  
Oil..... SAVE 560 pounds \_\_\_\_\_  
Gas..... SAVE 400 pounds \_\_\_\_\_
- e. Install a solar thermal system to help provide hot water...  
SAVE 720 pounds \_\_\_\_\_
- Subtotal CO<sub>2</sub> saved: \_\_\_\_\_

### 3. HOME APPLIANCES

Hints: When replacing your old appliances look for the **Energy Star** label to help reduce energy consumption by up to 40%. And remember to wash clothes in cold(or warm) water whenever you can.

- a. Turn the old refrigerator in for a new high-efficiency model.      SAVE 220 pounds \_\_\_\_\_
- b. Run your dishwasher only with a full load. Use the energy-saving setting to dry dishes.  
Don't use heat when drying.      SAVE 200 pounds \_\_\_\_\_
- c. A washing machine that uses energy and water efficiently will reduce CO<sub>2</sub> emissions.  
SAVE 440 pounds \_\_\_\_\_

Subtotal CO<sub>2</sub> saved: \_\_\_\_\_

### 4. HOME HEATING AND COOLING

Hint: Ask your utility company for a home energy audit to find out where your home is poorly insulated or energy-inefficient. CO<sub>2</sub> reduction: Potentially, thousands of pounds/yr.

- a. If you need to replace your windows, install the best energy-saving models.  
SAVE up to 10,000 pounds a year \_\_\_\_\_
- b. Consider going back to using some wood to heat your home. Replace the woodstove with one that has a catalytic converter and reduce your use of oil or other fuels. Use of renewable energy sources such as wood do not add any net CO<sub>2</sub> - other than that due to harvesting, processing and transportation energy use - providing the harvest areas are managed to provide continual re-growth which sequesters CO<sub>2</sub>.  
For every 100 gallons of oil saved SAVE 2,200 pounds \_\_\_\_\_  
For every 100 gallons of bottled gas saved SAVE 1,300 pounds \_\_\_\_\_
- c. Nudge the thermostat down one degree this winter.      Electric..... SAVE 410 pounds \_\_\_\_  
Oil..... SAVE 250 pounds \_\_\_\_  
Gas..... SAVE 180 pounds \_\_\_\_
- d. Give that overworked heating system a 10-degree rest when we're in bed at night...  
Electric... SAVE 2,070 pounds \_\_\_\_  
Oil..... SAVE 1,260 pounds \_\_\_\_  
Gas..... SAVE 900 pounds \_\_\_\_
- e. Turn the air conditioner's thermostat up a single degree.....SAVE 220 pounds \_\_\_\_
- f. Get an annual tune-up. Replace filters as recommended. Save 5% of energy used.  
Air Conditioner: SAVE 220 pounds \_\_\_\_  
Furnace:(Electric) SAVE 1,030 pounds \_\_\_\_  
(Oil) SAVE 640 pounds \_\_\_\_  
(Gas) SAVE 450 pounds \_\_\_\_
- g. Caulk or plug up leaks around windows and doors with weather-stripping and close the curtains and shades at night.  
Electric..... SAVE 1,600 pounds \_\_\_\_  
Oil..... SAVE 1000 pounds \_\_\_\_  
Gas..... SAVE 700 pounds \_\_\_\_
- h. Insulate your walls and ceilings; this can save about 25% of home heating bills.  
SAVE up to 2000 pounds \_\_\_\_

Subtotal CO<sub>2</sub> saved: \_\_\_\_\_

**5. GETTING AROUND**

Hint: If your car has an air conditioner, make sure its coolant is recycled whenever you have it serviced. These gases are much more active than CO<sub>2</sub> in terms of greenhouse gas effects. Save thousands of pounds of emissions.

- a. Whenever possible, walk, bike, carpool or use mass transit.  
For every gallon of gasoline saved... SAVE 20 pounds.      \_\_\_\_\_ # of gallons x 20 = \_\_\_\_\_
- b. Trade in the gas-guzzler for a fuel-efficient car -one that gets five miles more per gallon...  
SAVE 2,000 pounds \_\_\_\_\_  
one that gets 10 miles more per gallon... SAVE 4,000 pounds \_\_\_\_\_
- c. Carpool; leaving your car at home two days a week.  
SAVE 1,590 pounds \_\_\_\_\_
- d. Treat the car to a tune-up once a year.....SAVE 900 pounds \_\_\_\_\_
- e. Combine car errands into one fuel-saving trip.....SAVE 500 pounds \_\_\_\_\_
- f. Keep our car tires properly inflated.....SAVE 250 pounds \_\_\_\_\_
- g. Flying produces about 0.9 pounds of CO<sub>2</sub> per person per mile, whereas  
mass transit produces about 0.5 pounds per person per mile. When possible  
for shorter trips (500 miles or less), consider using the bus or train.  
Pounds of CO<sub>2</sub> saved = 0.4 lbs. per mile X \_\_\_\_\_ number of miles.      SAVE \_\_\_\_\_

CO<sub>2</sub> Subtotal saved: \_\_\_\_\_

**6. REDUCE, REUSE, RECYCLE**

Hint: Reduce waste; buy minimally packaged goods; choose reusable products over disposable ones; recycle.

- a. Recycle aluminum cans, glass bottles, metal cans, plastics, cardboard, and newspapers. Recycling  
25% of your garbage can reduce your home's CO<sub>2</sub> emissions by at least 850 lbs. per year.  
For 25% recycling SAVE 850 pounds \_\_\_\_\_

Or (but not both), itemize your recycling savings:

- b. Recycle one aluminum can a day...SAVE 140 pounds \_\_\_\_\_
- c. Recycle one glass bottle a day.....SAVE 100 pounds \_\_\_\_\_
- d. Recycle one newspaper a day.....SAVE 50 pounds \_\_\_\_\_

Subtotal CO<sub>2</sub> saved \_\_\_\_\_

**7. IN THE YARD**

Hint: Plant trees next to your home and paint your home a light color if you live in a warm climate, or a dark color in a cold climate.

- a. Use a push mower instead of a power mower.....SAVE 80 pounds \_\_\_\_\_
- b. Plant a tree on the south or west side of our home to provide cooling shade...  
SAVE 150 pounds \_\_\_\_\_

CO<sub>2</sub> Subtotal saved \_\_\_\_\_

## 8. SCHOOLS, BUSINESSES, AND COMMUNITIES

Hints:

- Reduce waste and promote energy-efficient measures at your school or workplace.
- Ensure that office equipment is turned off each night. A computer and monitor can each use 200 watts per hour.

a. Work at your business or in your community to set up recycling programs. For every pound of office paper recycled... SAVE 4 pounds.  $4 \times \underline{\hspace{1cm}} \# \text{ of pounds} = \# \text{ of pounds of CO}_2 \text{ saved} \underline{\hspace{1cm}}$

b. Replace some business travel with video conferencing. For example, with short air trips, roughly 88 lbs. of CO<sub>2</sub> are emitted for each 100 miles of travel by one person. The emissions associated with videoconferencing are estimated to be less than 1% of those from air travel. Use video conference in lieu of air travel one time for 500 mile distance. SAVE 880 pounds  $\underline{\hspace{1cm}}$

c. If your job allows, work at home one day a week and save 20 lbs. CO<sub>2</sub> for each gallon of gasoline not used in transportation. Save  $\underline{\hspace{1cm}}$  gallons per week X  $\underline{\hspace{1cm}}$  number of weeks =  
SAVE  $\underline{\hspace{1cm}}$  pounds.

CO<sub>2</sub> Saved Subtotal  $\underline{\hspace{1cm}}$

## 9. FOOD CONSUMPTION

Hints:

a. Replace meat with vegetarian entrees at several meals each week. Meat production/factory farming is considered by the Union of Concerned Scientists to be one of the major contributors to global warming. (No greenhouse gas emissions savings figures are available at this time.)

b. Buy organic produce. Food production using other methods requires petrochemical-based fertilizers and highly mechanized and fossil-fuel powered technology.

c. Buy locally produced food which requires minimal transportation.

## 10. LEGISLATIVE ADVOCACY

Be informed about environmental issues. Keep track of candidates' voting records and write or call to express concerns.

Educate others and become an advocate for change in regards to lowering our energy consumption and wastefulness as a culture. Remember, you are only affecting one-third of the reductions necessary per person in order for us to meet the Kyoto -7%/1990 CO<sub>2</sub> reduction goal. The other two-thirds of the energy saving, efficiency increases must be made up through changes in the way business, industry, public transportation, government and the military use energy and generate waste.

Carbon dioxide reduction (if we vote to raise U.S. auto fuel efficiency standards-CAFE), would save billions of pounds nationally!

ADD UP YOUR POUNDS OF CO<sub>2</sub> SAVED FROM

Section 1	
Section 2	
Section 3	
Section 4	
Section 5	
Section 6	
Section 7	
Section 8	

**GRAND TOTAL OF POUNDS OF CO<sub>2</sub> SAVED** (add) \_\_\_\_\_



***THANK YOU FOR PARTICIPATING !***



***THANK YOU FOR HELPING TO REDUCE GLOBAL WARMING !***

To get help with this worksheet you can contact—

Caryl Everett	282-1123	caryl@maine.rr.com
Don Horton	283-0717	dhorton1@maine.rr.com
Randa Thomas	929-3593	randat@psouth.net

To learn more about global warming –

[www.epa.gov/globalwarming](http://www.epa.gov/globalwarming)

[www.epa.gov/globalwarming/kids](http://www.epa.gov/globalwarming/kids)

[www.ucsusa.org](http://www.ucsusa.org)

[www.undoit.org](http://www.undoit.org)

[www.hotearth.net](http://www.hotearth.net)

[www.ncdc.noaa.gov/oa/climate/globalwarming.html](http://www.ncdc.noaa.gov/oa/climate/globalwarming.html)

[www.worldwildlife.org/climate/climate.cfm](http://www.worldwildlife.org/climate/climate.cfm)

[www.maineenvironment.org/air/NE\\_Climate\\_change\\_report.htm](http://www.maineenvironment.org/air/NE_Climate_change_report.htm)

[www.ProtectingCreation.org](http://www.ProtectingCreation.org)

[www.energystar.gov](http://www.energystar.gov)

or contact

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