

**FCCB Climate Action Ministry Team's
Carbon Anonymous Meeting #1 – 11/29/06
Agenda & Information**

TOPIC: TRANSPORTATION - PART I
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Part I - Overview

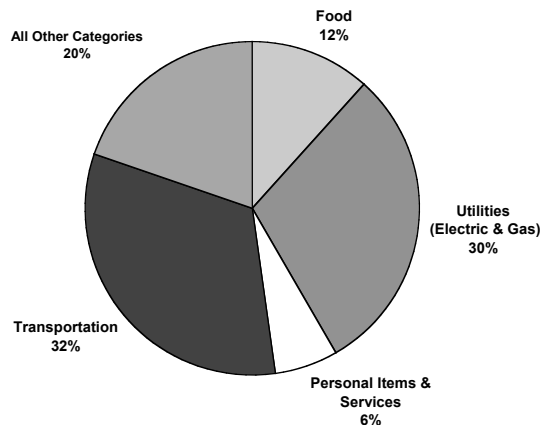
Part II – Reducing use of your car (walking, biking, mass transit, finding ways to drive less)

Part III -- Selecting a fuel-efficient car (including hybrids)

Part IV -- Maximizing the efficiency of the car you have

I. OVERVIEW: The Biggest Carbon “Hits”

A. Transportation is the biggest household contributor to global warming (32%)¹



B. Of Transportation:

- ∞ 29% is from vehicles
- ∞ 1% is from air travel
- ∞ Balance is from personal travel on rail, bus, boats, etc.

C. You can reduce the carbon footprint of your vehicle in three basic ways, in descending order of impact:

¹ Brower and Leon, *A Consumer's Guide to Effective Environmental Choices*, Table A-4 (1999).

1. Reduce the number of miles driven – reductions proportional to fraction of miles saved
2. Replace your car with one of greater fuel economy – depends on old vs. new fuel economy
3. Improve driving habits & car maintenance

D. Example: A 2000 Subaru Forrester gets ~20 mpg. If driven the national average of 12,000 miles driven/year, it produces 9,580 lbs of CO₂ annually.

This carbon could be:

- ∞ cut 50% by cutting miles driven by half (or 100% by giving up the car altogether), or
- ∞ cut 45% by replacing the Forrester with a Prius (conservatively assuming 45 mpg for the latter; less benefit with smaller spread between old and new car; more with greater spread), or
- ∞ cut 10% by improving driving habits and maintenance.
- ∞ Do all three and cut carbon by 78%!

II. REDUCING USE OF YOUR CAR



A. Things to Consider

1. Can I change my attitudes about cars and other transportation?
2. Can I get where I need to go without a car?
3. Do I live in an urban area?
4. Are there transit stations or bus stops near me?
5. Do I live close to amenities?
6. Am I flexible?

1. See below “Can I live car-free/car-lite?”

B. Getting Started

1. **Do some research**
 1. Explore neighborhood and community
 2. Ask neighbors, friends, co-workers, and people you see walking, biking, and using public transportation
 3. Conduct Internet searches
2. **Choose your preferred mode(s) of carbon-lite transportation**
 - a. Walking: see <http://www.yvcog.org/ctr/walk.htm>
 - i. Use your feet for closer trips (you decide distance)

- ii. Look for places where there are other people, good lighting, wide sidewalks, and places that are aesthetically pleasing
- iii. Use a back pack, bags (FCCB's works well!), and/or carts with wheels to carry goods
- iv. Use good shoes- have a change of shoes at the office

b. Biking

- i. Use for trips a little further away (you decide distance)
- ii. Look for streets with bike paths/wide shoulders, less traffic, and good lighting
- iii. Risk of accident decreases when cyclist follows rules, wears a helmet, and uses lights
- iv. Use a back pack, baskets, and trailers to carry goods.
- v. Have a change of clothes and consider asking employer if showers and bike racks could be possible.
- vi. Three good websites on biking:
www.bicyclinglife.com
<http://www.bfbc.org/>
<http://bicycling.511.org>

c. Mass Transit

- i. Best websites: www.511.org, www.actransit.org, www.bart.gov
- ii. Use mass transit for trips further away (you decide distance)
- iii. Consider: less stress, more productive
- iv. Find routes convenient for you, which stops you want, and what side of the street you should be on.
- v. Have the exact change and schedule; consider purchasing a pass

d. Play "The Circle Game"

- a. Find your neighborhood/home on a map
- b. Place the point of a compass on your home and draw a circle with two-mile radius (you can choose a different radius or use concentric circles to determine places that are within walking and biking distance)
- c. Find places that you regularly visit and mark them on the map.
- d. Choose one of the places that fall within the circle and try walking, biking, or using public transportation to get there.

- e. Commit to walking, biking, or using public transportation to another place and continue until you have tried alternative types of transportation to get to all the places within your circle.
- f. See how many places outside your circle can be replaced with an alternative within the circle.
- g. See if you can find closer services – e.g., a closer pharmacy
- h. Decide how far you are willing to walk and bike, and make a commitment to use those alternatives regularly

3. **Dealing with time**

“Test” how long it takes to get a place driving versus walking, biking, and taking public transportation (door-to-door, i.e., include parking time)

4. **Consider moving closer to your work and necessities**

5. **But I Have Children!!**

- 1. Car-lite/free can be still accomplished with small children by using a stroller when walking or taking mass transit, and using trailers/attachments when biking.
- 2. If a car is necessary, consider car sharing
- 3. Car-lite/free will teach your kids a great lesson and good habits!

6. **“Helpful Tips**

- a. Eliminate unnecessary trips
 - i. Combine trips
 - ii. Tele-commute
 - iii. Use the Internet for shopping – many services, including groceries and pharmacy, are available
- b. Plan ahead
- c. Be patient
- d. Rent cars/car share
- e. Delay instant gratification
- f. Simplify and slow down
- g. When it gets tough, remember you are doing your part!

7. **Other Resources**

- i. <http://www.bikesatwork.com/carfree/>
- ii. “How to Live Well Without Owning a Car” by Chris Balish
- iii. “Divorce your Car! Ending the love affair with the automobile” by Katie Alvord

III. SELECTING A FUEL-EFFICIENT CAR (Including Hybrids)

A. When Does It Make Carbon Sense To Replace Your Car?

Frequent question: “Doesn’t it cost more carbon to manufacture a new car than to continue driving my old one?”

Answer: Not if your new car is 10-15% more efficient than your old one.

1. 10-15% of a car’s GHG emissions are from production and disposal of a vehicle
2. Rule of thumb: if your new car gets 10-15% better fuel economy than your old one, it makes carbon sense to replace it.
3. Example: If you replace a 20 mpg car with a 45 mpg car, it would take 20,000 miles to “recoup” the carbon used in manufacturing; the rest of the 160,000 miles on the car are at a carbon “profit.”
4. The same is true – even a bit better – for hybrid vehicles (with their batteries)
5. For more details, see [“When to Replace Your Old Car.”](#)

B. Fuel Economy Leaders For The 2007 Model Year

Fuel Economy Leaders: 2007 Model Year		
Rank	Manufacturer/Model	MPG city/highway
1	Toyota Prius (hybrid-electric)	60/51
2	Honda Civic Hybrid	49/51
3	Toyota Camry Hybrid	40/38
4	Ford Escape Hybrid FWD	36/31
5	Toyota Yaris (manual)	34/40
6	Toyota Yaris (automatic)	34/39
7	Honda Fit (manual)	33/38
8	Toyota Corolla (manual)	32/41
9	Hyundai Accent (manual) Kia Rio (manual)	32/35 32/35
10	Ford Escape Hybrid 4WD Mercury Mariner Hybrid 4WD	32/29 32/29

Highest Fuel Economy by Vehicle Class: 2007 Model Year

Class	Make/Model	MPG city/highway
Two Seater	Mazda MX-5 (manual)	25/30
Minicompact Car	New Beetle Convertible	22/30
Subcompact Car	Toyota Yaris (manual)	34/40
Compact Car	Honda Civic Hybrid	49/51
Midsize Car	Toyota Prius (hybrid)	60/51
Large Car	Hyundai Sonata (manual)	24/34
Small Station Wagon	Honda Fit	33/38
Midsize Station Wagon	Ford Focus Wagon (manual)	27/37
Sport Utility Vehicle	Ford Escape Hybrid FWD	36/31
Minivan	Dodge Caravan 2WD	20/26
Pickup Truck	Ford Ranger Pickup 2WD (manual)	24/29
	Mazda B2300 2WD (manual)	24/29
Van (Cargo & Passenger)	Chevrolet G1500/2500 Chevy Van 2WD (4.3 and 5.3 liter engines)	15/20
	GMC G1500/2500 Savana 2WD	15/20
	Cargo (4.3 and 5.3 liter engines)	

SOURCE: <http://www.epa.gov/fueleconomy>

1. Good fuel economy websites:
 - a. U.S. EPA's www.fueleconomy.gov
 - b. ACEEE's www.greencars.com.
 - c. The Union of Concerned Scientists has a great hybrid car buyer's guide (compare all available hybrids, plus non-hybrids, based on your city vs open-road driving) -- www.hybridcenter.org.
2. Tax credits from \$250 - \$2,600 are available. See http://www.fueleconomy.gov/feg/tax_hybrid.shtml.
3. HOV (carpool lane) stickers – 10,000 available in 2007 (see “[More Hybrid Vehicle Info](#)”)
4. Interesting facts about hybrids:
 - a. Toyota has a comprehensive battery recycling program
 - b. The battery is warranted for 80-100,000 miles, but is likely to last for the life of the car.
 - c. When necessary, Toyota will replace the battery with a state of the art battery (at cost), which they are designing to fit their existing cars.

- d. Not all hybrids are equal. See [“More Hybrid Vehicle Info” document](#)
- e. Toyota’s hybrids will get cheaper with the 2008 model year due to improved technology (which they will be putting in non-hybrids as well).
- f. Used Prius’s are available at Toyota of Berkeley with warranties.

IV. MAXIMIZING THE EFFICIENCY OF THE CAR YOU HAVE

- ∞ Drive efficiently
- ∞ Keep your car well-maintained
- ∞ Plan and combine trips, telecommute, carpool

See [“Maximizing the Efficiency of the Car You Have” document](#)