WHAT YOU CAN DO: PART TWO
Act Personally to Shrink Your Carbon Footprint

Given that we have 10 years to avert catastrophic climate change by bringing down our global greenhouse gas emissions 50% by 2030 and to net zero by 2050, joining with others to push our governments to respond, (Part One WHAT YOU CAN DO) is most important. However, your own personal actions continue to be vitally necessary as well.

Key Personal Actions

See the next pages for how you can take these actions.

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While changes in lifestyle are not sufficient to meet the climate emergency, they are still absolutely and vitally necessary. The consumer choices we make can lower our carbon emissions while at the same time sending a strong signal to corporations that we want environmentally responsible products.

How much do we need to cut? If we use the recent IPCC guidelines for the world as a whole and apply it only to individuals as a very rough approximation, we must cut our emissions 50% by 2030 and go to net zero by 2050.

Of course, to accomplish that will require large governmental action to transform our energy economy, however we need to play our part as a consumer in this process. We already have many fossil fuel-free choices we can make.

Those of us in the developed world, who are responsible for the cumulative emissions over many years and who continue to emit at high levels, need to reduce our emissions substantially.

Per capita carbon emissions in 2018 were 15T (metric tons) for Canadian and American citizens; 5-9T for Europeans, vs. 1.6T for Indian and 1.7T for Indonesian citizens and under 1T for many people of the world. (Although China was at 8T.)
https://www.ucsusa.org/resources/each-countrys-share-co2-emissions

1. Get Realistic: Measure Your Carbon Footprint And Establish A Personal Carbon Budget

The first step is to find out what your personal carbon emissions actually are. The Carbon Footprint Calculator can help you start the process. It can also direct you to offsetting projects but see the larger discussion below on that topic.
https://www.carbonfootprint.com/calculator.aspx

What should your targets be? 50% less by 2030; net zero by 2050. So how can you get there? The New York Times offers a good overview, including much of what we will be covering here.
https://www.nytimes.com/guides/year-of-living-better/how-to-reduce-your-carbon-footprint
Click here: https://nyti.ms/2QNzD23

On the ShrinkThatFootprint website, you can get much information about our carbon usage plus a "30 day Shrink Guide" as well as an ebook to guide you in going on a carbon "diet."
http://shrinkthatfootprint.com/

Low Carbon Diet by David Gershon has spawned many Low-Carbon Diet groups. You can get support for putting the wisdom of the book into action by joining one of these groups (or starting one).
https://www.empowermentinstitute.net/index.php/community/low-carbon-diet

As with the carbon calculator mentioned above, there are other websites that will both calculate your carbon footprint and offer the opportunity to buy carbon offsets such as planting more trees. Terrapass is one example. Gold Standard, which lets you select from a variety of projects, is another.
https://www.terrapass.com/
https://www.goldstandard.org/take-action/offset-your-emissions

Note however, that offsets are a temporary measure allowing fossil fuel companies to stay in business. Typically, they set up projects in developing countries whose governments are desperate for the income. Unfortunately these projects often displace native people from their land, taking away their source of sustenance. Also, it is not always clear if the projects are effective in sequestering as much carbon as the fossil fuel emissions they are supposedly offsetting.

2. Cut Your Emissions

At home

If possible use an automated thermostat that will change the temperature to adjust heating and cooling to when and where it is needed.

Your home may be leaking energy through walls, doors, fireplace, and windows. Sealing leaks and insulating walls and attics can make an enormous difference.

Many rebate programs are now available to evaluate your house or the buildings in which your business, church, or other organization operates. They can find energy leakages and suggest energy retrofits.

Switch to LED lights in your home. Then pressure the place where you work, your church, university or other organizations, as well as your city, county and state to do the same.

If you are building a new house, build it "green." Find out how proper orientation to the sun and prevailing winds, a green roof, or other improvements can minimize your need for heating and cooling.

Buy only energy-efficient appliances. In the U.S. look for the Energy Star ratings of refrigerators, heaters, etc. Visit this EPA site in advance before buying:
https://www.energystar.gov

Turn off lights and all electrical appliances when they are not in use. Conserve water; even cool water requires energy to pump to your house. Every little bit of energy savings adds up.

Check with your local utility to see if there are rebate programs for owning energy efficient appliances and/or for retrofitting buildings.

If you rent your home or an apartment, speak to your landlord about these energy savings.

Cut emissions in your choice of energy

Don't fall for the argument that natural gas (i.e. methane) is a "bridge" fuel. It does result in less greenhouse gas emissions than oil or coal, however those emissions are still adding CO_2 to our atmosphere. Furthermore, there is a boom in fracking and fossil fuel companies are increasing their investments in gas infrastructure. The global LNG (liquefied natural gas) market is expanding by 4-6% per year.
https://www.forbes.com/sites/judeclemente/2017/07/09/the-rapidly-expanding-global-liquefied-natural-gas-market/#1d20a4952213
Click here: https://bit.ly/2SeYPzz

If at all possible, change to electricity for heating, cooling, and cooking. Find out if there are rebate programs to help you pay for installing solar panels or an air or geothermal heat pump on your house, or for erecting a windmill on your property. If you rent, push the owners to move to renewable energy. Likewise be an activist calling for renewable energy at work or in the organizations you belong to.

If you buy from a utility, it may have a program through which you can buy renewable energy. As an example, PG&E in California offers a solar program.

If you can't get clean energy from your utility, create or join a citizens' power utility. Learn about the process of community choice aggregation. In the San Francisco Bay Area, Alameda County has East Bay Clean Energy, and Marin County has Marin Clean Energy.
https://ebce.org
https://www.mcecleanenergy.org/

https://www.energysage.com/other-clean-options/community-choice-aggregation/where-are-ccas-available/
Click here: https://bit.ly/35PvnnN

Cut emissions when your travel

Whenever possible, switch to walking, biking, carpooling, or public transportation. Support public transportation measures.

Driving more efficiently can increase fuel efficiency. This includes minimizing idling, driving no faster than 55 mph, using ventilation instead of air conditioning, avoiding roof racks which produce extra wind resistance, and reducing how much weight you pack into the car.

Also it is very effective in maintaining the car's efficiency to regularly change air filters, keep tires properly inflated, and when replacing tires choosing the ones recommended for your vehicle.

Consider joining a car sharing program, rather than buying a car.

If you need to buy a vehicle, if possible, buy an electric or hybrid vehicle rather than one powered by gasoline or diesel.

As of September 2019, the Nissan Leaf had a range of approximately 151 miles that is adequate for many drivers. The Chevy Bolt was available with a range of 238 miles and Tesla's Model 3 offered 315 miles per charge. Many new makes and models are coming on the market at increasingly lower prices.

Of course, how effective these cars are in reducing your carbon footprint depends upon how your utility company gets its electricity. In the ideal situation, your own solar panels would be the source of your electricity and your car would run on sunlight!

Alternatively, you might choose to replace your older vehicle with a new or used car with better fuel efficiency. When to replace it and even if you should get a new car is a complex question because the amount of energy used in manufacturing a car (depending on the car's design) can be as much as all the energy eventually expended in driving it.
https://www.sierraclub.org/sierra/green-life/2013/10/ask-mr-green-how-much-energy-make-new-car
https://www.theguardian.com/environment/green-living-blog/2010/sep/23/carbon-footprint-new-car

California's Air Resources Board, will pay owners to remove their gasoline driven cars off the road. They will purchase cars manufactured in 2005 or earlier or newer cars that fail a smog test. They will also subsidize the purchase of a hybrid or electric car. There may be programs like this in other states.

If you do decide to get a new car should you resell or junk your old car? Reselling will keep it polluting for years more but perhaps will keep someone from buying a new car. If you decide to junk it, be careful to avoid having it simply crushed and sent to a landfill. A responsible dismantling company will remove its battery and toxic fluids, and recycle the tires, steel, aluminum, platinum and other elements composing it. Recycling greatly increases energy efficiency. As an example, recycling steel uses much less energy (and therefore emits less greenhouse gas emissions) than manufacturing it.

A yet more complex question is what type of transportation should you use depending on how far you are traveling and how many you are traveling with. The Union of Concerned Scientists (UCS) has published *Getting There Greener: The Guide to Your Lower-Carbon Vacation* to answer such questions. https://www.ucsusa.org/getting-there-greener

It is filled with useful information. For a very quick check on the greenest ways to travel depending on how many are traveling together and how far they are going: https://www.ucsusa.org/sites/default/files/2019-10/vaca_trav_carbon_guide.pdf

Below are some examples of what you can learn. (These assume you are driving a gasoline-fueled car.)

In general, driving alone, driving an SUV, and flying first class are the most carbon expensive ways you can go.

The most green travel option is to go by motor coach (i.e. bus).

When traveling alone or with another, for under 1000 miles, taking a train is the second-best option for lowering carbon emissions.

However for 1000 miles or more, traveling either solo or with another, the second best option is to fly coach rather than take a train.

In surprising contrast, it you are traveling with a family of four, irrespective of the distance traveled, driving a typical car is the second best option after taking a bus.

In general, flying on an airplane that has only coach seats is best and planes differ in their average carbon footprint depending upon their design. UCS lists all the major types of airplanes in order of their carbon efficiency in a chart on their website.

https://www.ucsusa.org/sites/default/files/2019-10/greentravel_report.pdf

Nonstop flights, by virtue of being direct, use less energy since each takeoff, landing and ground operation adds to the energy costs. If you must take a flight that stops, choose one that flies the most direct route.

If at all possible, avoid airports known to have long delays. Planes sitting on tarmac or circling while waiting to land consume much fuel.

When traveling by car or motor coach, avoid peak periods. Being stuck in traffic can double the fuel consumption rate compared to cruising. Various apps are now available to show you the best route given traffic conditions (e.g. Google and Apple maps).

When renting a car, participating in a car-sharing program, or taking a taxi, Uber, or Lyft, choose a more fuel-efficient car or a hybrid whenever possible.

While UCS does not comment on cruise ships vs. flying, other websites seem to agree that flying is better at conserving emissions than cruising. I suspect most of us would have imagined the reverse.

In general though, minimize travel. These days Zoom, Skype and Face time can allow you to visit with family or friends or hold organizational meetings virtually.

When you do travel, buy carbon offsets such as those offered by Terrapass. They will use your money to fund tree planting or other such projects.
https://www.terrapass.com/

Cut emissions by changing what you eat

In the U.S. we waste approximately 40% of our food. It's not just the food that's wasted, it's all the energy used in growing, packaging, transporting, refrigerating and stocking the food.

Buy what you need. Take restaurant leftovers home and eat them. If you know a restaurant is participating in a food bank program, choose to eat there. Compost food waste to put the nutrients back in the soil.

Eat less beef, lamb and pork. Use it more as a condiment, adding flavor to soups, salads, and vegetable dishes. Far less energy goes into providing a serving of chicken or fish than beef, lamb, or pork, and even less goes into a serving of vegetables.

Buy organic. It is better for you and the environment. Organic farms don't use toxic pesticides and herbicides. They use sustainable, efficient farming practices, and use

less fossil fuel-driven farm equipment. Livestock is treated more humanely and not kept on antibiotics.

Mostly, buy local. Several factors are important: how far food travels and how it gets there. Airplane is the worst. The NRDC reports that in 2005, importing fruits, nuts, and vegetables into California by airplane released an amount of carbon dioxide equivalent to driving more than 12,000 gasoline fueled cars. Forget eating peaches and grapes and cherries from Chile in the winter. Wait expectantly for the joy of the summer harvest!
http://www.goodfoodworld.com/wp-content/uploads/2012/10/foodmiles.pdf

Climate Collaborative reports "on average, packaging accounts for about 5% of the energy used in the life cycle of a food product making it a significant source of greenhouse gas emissions. And for some products, the packaging used has an even bigger impact on climate change than the fuel used to ship it to market."

Whenever possible buy everything in bulk, in glass jars or bottles or in metal cans. These are readily recycled. In contrast, in 2015 only 20% of plastic was recycled and over the many years since it was created, only 9%. Much of it ended in landfill, scattered about in air, water, and soil, or incinerated.

In fact, avoid plastic bags and packaging whenever possible. The emphasis on plastic pollution of our environment is only part of the story. Carroll Muffett, head of the Center for International Law (CIEL) has gathered global data on how much climate-warming greenhouse gas is produced by plastics from cradle to grave.

He concludes that emissions from plastic production and incineration could account for 56 gigatons of carbon between now and 2050. Part of this picture is the fact that the fossil fuel industry, in order to stay in business, has been greatly increasing its plastic production.
https://www.npr.org/2019/07/09/735848489/plastic-has-a-big-carbon-footprint-but-that-isnt-the-whole-story
Click here: https://n.pr/2TjUCuL
https://www.theguardian.com/environment/2017/dec/26/180bn-investment-in-plastic-factories-feeds-global-packaging-binge
Click here: https://bit.ly/2FHoCsA

If you can't buy in bulk, seek products with minimal and recyclable packaging.

Use cotton or reusable nylon mesh produce bags in place of the little plastic bags offered in the produce section. And bring shopping bags for carrying your purchases home.

When eating out, bring your own metal or glass containers for leftovers.

Compost your food scraps so they don't end up in landfill generating methane, and if there is no composting program offered by your city or county for compost, organize to request one.

Cut emissions by considering what you buy

First, don't buy the latest, newest offering. Use what you have. Or, find a way to rent or borrow what you need. If you really do need something, first try to buy it used.

When you need to buy something, check to see if the company that has made it has been socially and environmentally responsible and if the product itself is healthy for you. Visit www.goodguide.com/ and www.greenamerica.org/ and the environmental working group https://www.ewg.org.

If your favorite products don't meet the test, suggest improvements to the company. Since so few people actually call or write letters, yours will carry much more than one person's weight.

Whenever possible do not buy clothing, furniture, rugs, etc. made of plastic (although recycled plastic is better than new).

When buying electronics check to see if the company will accept discarded items and re-use their components to rebuild or refurbish a new product. If you find they don't but you still want their product, speak to them about "extended producer responsibility" and urge them to create such a program.

Also, if the company won't take it back, many recycling centers accept electronics.

Donate your used clothing and household items to Good Will, the Salvation Army, or other such projects.

Finally, break the consumer habit

Distinguish what you actually need from the "fill the holes" syndrome. When you are feeling unhappy, empty, or as if you were lacking something, find out what you are really missing and go after it rather than buying something that might ease the pain briefly but can never really fill that need.

There is now a great deal of research on what really makes people happy and it isn't possessions. In short it is: friendship, having meaningful work or a cause, and a sufficient level of money to provide food and shelter. In the U.S., $60,000 to $75,000 income per family seems to be the point beyond which more money doesn't seem to make much difference in emotional well being.

So, when you feel the need to shop: call friends, exercise, play music, read books, take a course, create something, meditate, or find or create a community.

3. Take Your Economic Power: Divest From Fossil Fuels And Invest In Socially And Environmentally Responsible Companies

Get an overview on green finance from our article: *Take Back Your Power—Your Economic Power* on our website: https://earthrisingaction.org. Below we highlight the major issues and what to do about them.

Most of the world's largest banks are heavily invested in the fossil fuel industry. Some examples in the U.S. include: JP Morgan Chase, Bank of America, Wells Fargo, Citibank, Goldman Sachs, etc. Move your money to a smaller bank or a credit union that invests in the community.
https://www.ienearth.org/banking-on-climate-change-fossil-fuel-report-card-2019/

The major insurance companies are the second largest investors in fossil fuels. Ironically they not only invest in these companies, but they insure them and the public for the damage they cause through their emissions!

In the U.S. (as of 1/2020) only Chubb Ltd has divested from coal, although in Europe AXA, Allianz, Zurich, Munich Re, Generali, Lloyd's, Hannover Re, SCOR, Swiss Re, AG2R, La Mondiale, Groupama, and others are also divested. Perhaps you can insure with them or if not, pressure your insurance company to stop supporting coal.
https://unfriendcoal.com/about/
https://unfriendcoal.com/wp-content/uploads/2018/11/Scorecard-2018-report-final-web-version.pdf
Click here: https://bit.ly/36JvxgJ

In addition, if you have a pension plan, a mutual fund, a stock index or an individual stock invested in fossil fuels, you are supporting the industry and contributing to greenhouse gas emissions in a significant way. Either divest from these companies or work from the inside by buying their stock, and then becoming a shareholder activist.

How to divest and re-invest

Visit Green America for an excellent discussion on how to move your money to work for social and environmental good.
https://greenamerica.org/finance
https://greenamerica.org/divest-reinvest.

Green America can help you to find a bank, credit card and credit union that don't invest in the fossil fuel industry.

https://greenamerica.org/getabetterbank
Another resource for finding a local community-oriented bank is BankLocal
https://banklocal.info/

Or, if you are feeling feisty, you could invest in fossil fuel companies and become a shareholder activist, and advocate for green policy decisions.
https://greenamerica.org/shareholder-activism

The organization Fossil Free explains divestment in great detail (drawing upon resources from 350.org). They can connect you with local groups and events to support you in taking this important but somewhat challenging step.
https://gofossilfree.org/divestment/what-is-fossil-fuel-divestment/

Check out The Forum for Sustainable and Responsible Investment (USSIF) to see an excellent list of mutual funds that are socially and environmentally responsible.
https://www.ussif.org/.

As you withdraw money from banks, insurance companies or various investments, tell them how you feel about what they are doing and ask them to move their assets into renewable energy.

As you become more expert in the divest/re-invest process, encourage (even educate!) friends, family, and colleagues as well as your church, university, city, or state government to do the same.

You can let them know that fossil fuel companies are a risky investment since they count the oil, gas and coal still in the ground as assets on their balance sheets. As our governments become more aware of the relationship between fossil fuel emissions and global warming and are pressured to take strong action, these supposed assets will be considered unburnable and "stranded." Actually, some are already saying that investments in fossil fuels at this point constitute a "carbon bubble."
https://www.carbontracker.org/reports/balancing-the-budget/

Most recently, Larry Fink, the CEO of BlackRock, an American global investment management company, in recognition of the climate emergency, has put sustainability at the core of its investment strategy. **BlackRock** is the world's largest asset manager, with $6.96 trillion in assets under management as of September 2019.This could well begin a trend.
https://www.blackrock.com/us/financial-professionals/blackrock-client-letter

There are also a number of businesses and banks that espouse not only shareholder but also stakeholder responsibility. There is the Global Alliance For Banking on Values which is an association of independent banks concerned with sustainability and

serving underserved people. On their website you can get a list of banks which meet their higher criteria.
http:www.gabv.org/

There are also banks that seek to expand their "bottom line" to include not only profit but also social and environmental benefits. Learn about these Benefit Corporations and Certified B Corporations.
https://benefitcorp.net/what-is-a-benefit-corporation
https://bcorporation.net

For More Information On How to Take Action:
What You Can Do Part One: Joining with Others to Exert Group Pressure
Take Back Your Power—Your Economic Power

Earth Rising Action Network .https://earthrisingaction.org