

# HELP

## Hot Earth Liberation Plan

What you can do to fight climate change



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# What You Can Do To Fight Climate Change

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## What You Can Do To Fight Climate Change

Human-caused climate change (known simply as climate change) is now changing the world so quickly that we need to use our **voices**, our **votes**, and our **choices** to fight it. While no single silver bullet exists that will stop climate change, there is plenty of silver buckshot that we can use, in combination, to successfully fight climate change. The most common of these “buckshot” are listed below by category (voice, vote and choices). Take actions in each category as frequently as possible. Try especially to take actions **in bold text**; these will have the greatest effect on stopping and reversing climate change. Note that while taking some of these actions will directly or indirectly cost you money, our failure to take these actions will end up costing all of us thousands of times more money and, ultimately, the human-habitability of the planet.

**Use Your Voice** – use your voice, every day if possible, to speak up about climate change

1. **Talk about your climate change concerns to family, friends, neighbors, classmates, co-workers and other folks you encounter in your life.** Fewer than one person in five hears someone they know talk about climate change. Spread the word and make it “normal” for people to think and talk about climate change!
2. **Be an influencer! Email, call and write to your city, county, state and federal representatives to support actions that will fight climate change and oppose actions that will worsen it.** Some candidates and law makers have stated they will only act on climate change if they know that people care. Below is a list of actions that will help fight climate change. Need help to know whom to contact about which matters and when? Join groups listed at the end of this handout.
  - a. Promote increased regulation of greenhouse gases<sup>1</sup>. Regulations could include fees on the emission of carbon dioxide and methane as well as stronger requirements for capturing refrigerant gases from old air conditioners, refrigerators and freezers.
  - b. Promote regulations and funding that facilitate switching from using fossil-fuels<sup>2</sup> to using renewables<sup>3</sup> to generate energy. Such regulations and funding could consist of providing federal incentives to the fossil-fuel industry to leave its fossil-fuel reserves in the ground; eliminating government fossil fuel company subsidies; providing federal, state and local funding for renewable energy generation projects; requiring the closure of coal mines; and providing funding to help individuals and non-profits install solar panels.
  - c. Oppose projects that mine, transport or burn fossil-fuels. For example, oppose new coal mines, the construction or expansion of oil and natural gas pipelines, the construction of plants that liquify natural gas, and the expansion of oil refineries.
  - d. Promote legislation and projects that support public transportation and decrease emphasis on single-occupancy car use. For example, support the construction and operation of light rail, rapid transit and buses, support the enforcement of transit- and carpool- only lanes, and support the construction of pedestrian and bicycle facilities.

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<sup>1</sup> Greenhouse gases warm the planet, causing climate change. The most common greenhouse gases are carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), and gases used for refrigeration (hydrofluorocarbons or HFCs).

<sup>2</sup> Fossil-fuels are energy sources that are created naturally over millions of years. They emit greenhouse gases when burned. Coal, oil and natural gas are fossil fuels. Natural gas is also a greenhouse gas even when not burned because it is as much as 90% methane (CH<sub>4</sub>).

<sup>3</sup> Renewables are sources of electric energy that are quickly naturally renewed and that don't emit greenhouse gases when used to generate electricity. Renewables consist mainly of sunlight (solar-power), wind (wind-power) and water (hydro-power).

- e. Promote the use of electric vehicles and the sale of more efficient gas-powered vehicles. For example, support construction of electric vehicle charging stations and support regulations requiring greater fuel efficiency for all gas-powered vehicles.
- f. Promote regulations and funding that support energy efficiency retrofits of existing houses and buildings,
- g. Promote the use of electricity to heat houses and buildings. For example, support legislation requiring, and off-setting the cost of, converting from oil heat to electric heat; support legislation eliminating new natural gas hookups.
- h. Promote codes requiring greater energy efficiency of building construction methods and greater energy efficiency of new buildings.
- i. Promote up-zoning of single-family housing zones to multi-family residence zones.
- j. Promote protection of trees and forests. For example, in Seattle, support the enactment of a stronger tree protection ordinance.
- k. Promote funding for and implementation of Seattle’s Green New Deal, a resolution which details a broad range of “green” initiatives including transitioning away from fossil fuels. For further information, see, for example, the Seattle Met article at <https://www.seattlemet.com/articles/2019/8/21/what-seattle-s-green-new-deal-means-for-our-future>)

**Use Your Vote** – use your vote to select candidates and pass ballot measures to fight climate change

- 3. **Vote in every election.** Virtually every election presents an opportunity to select someone who will influence climate change policy at some level or to pass a measure that can limit greenhouse gas emissions in some way. Taking these opportunities is critical, especially because federal leadership on climate change is lacking. Further, by being a consistent voter, you will be put on a list of “likely voters” whose opinions are used to shape policy. If you are contacted and asked your opinion about issues, it’s important to let the poll takers know your thoughts on climate change.
- 4. **Vote for city, county, state and federal candidates that support action on climate change.** Such candidates will make climate change his or her top issue, have a target of getting to zero greenhouse gas emissions, or have a plan for addressing climate change. If no candidate makes climate change a priority or has a target or plan, support candidates that support the actions listed above under “Use Your Voice – Be an Influencer!”

**Use Your Choices** – use your every-day choices to reduce your carbon footprint<sup>4</sup>

Examine the choices you make in your life and change them to reduce your carbon footprint. Start with the changes you can and add in changes as you go. Let people and companies know you’re doing this – it can get them to change practices that contribute to climate change.

#### **Transportation**

- 5. **Reduce, and strive to eliminate, travel in cruise ships and airplanes.** Cruising and flying are among the worst things a person can do. Either could easily eliminate the beneficial effects of all of your other greenhouse gas-reducing actions taken together. Consider whether you could substitute traveling by train, bus, or carpool, take a trip closer to home, or forego the trip and instead have a local adventure or a videoconference.
- 6. Reduce, and strive to eliminate, your single-occupancy vehicle usage. Instead, take public transit, carpool, bike or walk. Note that taking an Uber or Lyft as a single passenger can be worse than driving yourself in your own car because once you’re dropped off, Uber and Lyft

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<sup>4</sup> A person’s carbon footprint is the amount of greenhouse gases that a person emits the course of everyday life.

drivers continue to drive around looking for further passengers, emitting carbon and congesting roads for buses and carpools.

7. Use cars efficiently to make wise use of fuel. Combine and plan trips to make an efficient route that avoids back-tracking and spur trips. As much as possible, keep your speed at or below 55 miles per hour, even on the freeway. Start and stop smoothly. Shut off your car rather than letting it idle for long periods. Keep your car in good running condition. Properly inflate tires. Remove unused roof-racks and bicycle racks. Remove excess weight (stuff!) from the car.
8. If you're buying a car, buy an electric vehicle because it can be fueled by renewably-generated electricity. Next best is a hybrid vehicle with a high miles-per-gallon rating. Note that hybrid SUVs, which tend to be larger vehicles that have "all-wheel-drive all the time," will not have high miles-per-gallon ratings compared to non-SUV hybrid vehicles that are the same or smaller size.

### Food

9. **Eat plant-rich diets and have more meatless meals.** Raising animals releases more greenhouse gases than growing plants (seven pounds of plant protein are needed to make one pound of meat protein). If you eat meat, eat fish, chicken, turkey, or pork and avoid beef and lamb, the raising of which releases the most carbon emissions of any commonly sold meat. Note that most deforestation occurring today is to clear land to facilitate raising cattle for food.
10. Take or buy only the food that you will eat and eat all of the food that you take or buy. Don't throw food away or let it go bad! Almost 25% of all food purchased at grocery stores is thrown away. This wastes all of the greenhouse gases emitted in raising, harvesting, packaging, and transporting that food.
11. Buy "imperfect" food and produce, which is food and produce that is perfectly good but doesn't meet the food industry's "beauty" or "sell by" standards and hence is often thrown away, again wasting all of the greenhouse gases emitted in producing, packaging and transporting it. Dented canned goods, damaged packaged goods, reduced-price meat and dairy products, and imperfect produce can be bought from clearance or dedicated areas of some grocery stores, including Fred Meyer, Grocery Outlet and Safeway.
12. Buy food that is in season, locally produced, and organically grown in order to reduce generation of greenhouse gas emissions from food production, packaging and transport.

### Home and Office Buildings

13. **Reduce the amount of energy needed to heat and cool your home and office by improving their energy efficiency.** There is a lot of energy efficiency work that remains to be done! Add insulation to your attic and walls. Repair leaks in heating and cooling ductwork. Replace drafty windows with energy-efficient, properly fitted double or triple paned windows. Close up gaps around exterior doors with weather-stripping and well-fitting thresholds. Caulk around window and door frames to block residual drafts. Close fireplace dampers when fireplaces aren't in use (many folks think their dampers are closed when they aren't). Consider removing or walling up your fireplace because many fireplaces can't actually heat living space and vent conditioned air from your home or office to the outside, even when the damper is closed. When replacing your roof, install a reflective or light-colored roof to prevent your home or office from heating up in the summer time. If you're installing or replacing a driveway, consider installing grass-block pavers to help keep the driveway from becoming a radiating heat source at the end of hot summer days.
14. Reduce the amount of energy used to operate your home and office by developing energy efficient habits. In the winter, keep the heat at 66 degrees and wear warm clothing inside. In the summer, open downstairs and upstairs windows during the cooler parts of the day and evening to allow the "stack effect" (warm air rising and pulling cooler air in behind it) to cool

your house. Keep blinds and curtains closed when you're not there to keep inside temperatures more constant. Regularly service your furnace and change its filter. Turn down your hot water heater temperature. Wash clothes in cold water (today's laundry soaps are formulated to work in cold water). Dry clothes by hanging them on racks or clotheslines. Conserve water (energy is used to pump water to your home or office) by installing low-flow toilets and shower heads, installing aerators on sink faucets, taking "Navy" showers and shutting off water during tasks like brushing teeth and rinsing dishes. Plug appliances that draw energy even when turned off (such as computers, monitors, printers and TVs) into switched extension cords and turn off the extension cords when the appliances aren't in use. Unplug energy-drawing appliances that are infrequently used (such clocks in spare bedrooms). Use LED light bulbs instead of incandescent light bulbs. Only turn on the lights you need and turn off lights when not needed.

15. **Conservatively acquire and properly maintain and dispose of air conditioners, refrigerators and freezers.** These appliances have a three-fold adverse effect on climate change. First, they allow people to mistakenly think that climate change can be endured because to date they have allowed people to survive heat waves and tolerate climate change's overall increased temperatures. Second, these appliances need electricity to work. If the electricity is generated by fossil-fuels, these appliances increase carbon emissions and worsen climate change. Third, these appliances cool air by using hydrofluorocarbons (HFCs), which can be thousands of times more potent in increasing temperatures than carbon dioxide. HFCs can leak from the appliances and significantly worsen climate change. What to do? First, minimize your purchase of these appliances. Take steps to keep your home and office cool (read about energy efficient habits, above). Use ceiling, window and room fans to cool and create breezes in the part of the building you're in. Use refrigerators and freezers efficiently. Second, clean and maintain your appliances to keep them in good working order. Third, treat them carefully to avoid causing leaks in the coils where the refrigerant gases are contained. Fourth and possibly most importantly, dispose of these appliances properly, ensuring the HFCs are captured before the appliances are disassembled or crushed.
16. **Prepare your appliances for being powered by electricity, which is the only readily available type of energy that can be renewably generated.** Replace oil- or natural gas- powered furnaces with mini-split ductless heat pumps or with a ducted heat-pump, possibly supported by an electric furnace. As you are able, replace your natural gas-powered appliances, such as your kitchen and laundry appliances and your hot water heater, with energy-efficient electric appliances. If you will be using your natural gas appliances until the end of their life, plan and start saving now for the type of electric appliances you will install so that, when your natural gas appliances fail, you'll know and be able to pay for the type of electric appliances you want to switch to. Note that switching from natural gas to electric appliances is also good earthquake preparation for our seismically active region. Many earthquake-related fires stem from broken natural gas pipelines and appliance supply lines. Such broken lines can function like blow-torches that might not be able to be put out for quite some time, depending on the earthquake magnitude and how busy responders are.
17. **Generate and use renewably-generated electricity for energy.** Install solar panels on your house, office, or garage roof or in arrays in your yard. If you don't own your building or have the money or proper sun exposure for solar panels, consider investing in community solar or other renewable energy projects – see "Money Habits," below.

## 🍁 Yard Planning and Care

Plants pull carbon dioxide out of the air and store it as carbon in their branches, trunks, and roots. The larger the plant or tree, the more carbon it stores or “sequesters.” Carbon is also stored in soil as organic matter.

18. **Care for and maintain existing trees in your yard, especially large trees.** If you have to remove a tree, plant a replacement tree, selecting one suited to our newly hot, dry summers. Choose the largest tree species your space can support. Plant additional trees as space in your yard allows. Water all newly planted trees during the summer for about the first three to five years. For help with tree selection, planting and establishment see <https://www.seattle.gov/trees/>.
19. Plant shrubs and perennials that grow deep roots and are drought tolerant when established. Plants with shallow roots won't survive without special irrigation in our newly hot, dry summers. Consider selecting deeply rooted, drought tolerant Pacific Northwest native plants. Because plant nurseries aren't yet leading the charge on identifying plants that will thrive in our new summer climate, try contacting <https://gardenhotline.org/> for assistance with plant selection.
20. Build up your soil with arborist chips and compost. They will increase the carbon content of the soil and the soil's ability to retain water, reducing the amount of water needed to maintain plants through the summer.

## 💰 Money Habits

21. **Move your investments, savings, loans and credit cards to funds and banks that don't support fossil-fuel projects (this is called divestment).** In particular, move funds, accounts, mortgages and credit cards from JPMorgan Chase, which is the largest Wall Street funder of major fossil-fuel projects, to funds and banks not involved with the fossil-fuel industry, such as socially-responsible funds and credit unions. For a list of banks that fund fossil-fuel projects, and therefore a list of banks to divest from, see, for example, <https://mazaskatalks.org/thebanks>.
22. Invest in or donate to solar- and wind-powered energy generation projects. For general information on such solar projects, which are referred to as community solar programs, see <https://350seattle.org/community-solutions/>. Consider paying a bit extra on your utility bill to buy renewably generated energy through Seattle City Light at <https://energysolutions.seattle.gov/renewable-energy/green-up/> and Puget Sound Energy at <https://www.pse.com/green-options/Renewable-Energy-Programs/renewables-home>.
23. Donate to organizations fighting climate change. Charity Navigator and Charity Watch are great online resources for researching larger groups to donate to. For smaller groups, such as those listed at the end of this handout, attend meetings and talk with organizers to decide which ones you might want to support.

## 🛒 Shopping and Consuming Habits

It takes energy, and therefore generally releases greenhouse gases, to create, package, and transport the goods we purchase and throw away on a regular basis. Further, items we throw away end up in landfills, where decomposition releases methane.

24. Don't buy new things unless you absolutely have to. Take care of, repair, use up, and repurpose the goods, equipment and clothing you already have. If you can, borrow, rent or buy used the items you need. For books, borrow from a library or read on electronic devices. If you have to buy things, whether new or used, buck the Amazon trend and buy from local stores to save on the energy Amazon uses in packing, shipping and delivering single items at a time. When you select items to buy, select locally produced goods if possible and buy quality items that will last. For an educational and entertaining 20-minute video on our production and consuming patterns, see “The Story of Stuff” at <https://storyofstuff.org/movies/story-of-stuff/>

25. Avoid generating waste and avoid sending waste to the landfill.
  - a. Avoid buying items with excess packaging. Buy in bulk and bring your own containers. Avoid single-serving containers by buying larger containers and using reusable containers to create portable single-servings. Choose items with less packaging. Bring your own bags.
  - b. Don't use single-use tableware and straws. Instead, carry with you and use your own refillable water bottle and reusable cup, straw, fork, knife and spoon.
  - c. Avoid using saran wrap and aluminum foil. Instead, use lidded reusable containers.
  - d. Go paperless. Subscribe to on-line versions of newspapers and other print media. Switch to paperless bills and statements. Stop junk mail by following the steps on Seattle Public Utilities' website at <https://www.seattle.gov/utilities/environment-and-conservation/my-home/reduce-reuse/stop-junk-mail>, including contacting companies that send unsolicited mail and asking to be removed from their mailing lists.
  - e. Take dry, worn-out shoes and clean, dry, worn-out textiles to threadcycle programs for reuse (in Seattle, see <https://kingcounty.gov/depts/dnrc/solid-waste/programs/ecoconsumer/threadcycle.aspx>).
  - f. Compost all food and yard waste in your own yard or using your curbside compost program (in Seattle, see <https://www.seattle.gov/utilities/services/food-and-yard>).
  - g. Use your curbside recycling program and recycle what is recyclable in your area - but don't put items into your bin that aren't recyclable – that can ruin the whole load! Check your recycling program for information on what is recyclable. For example, in Seattle, see <https://www.seattle.gov/utilities/services/recycling> and put only empty, clean and dry items into your recycling bin.

### Family Planning

Consider the overall carbon footprint Americans might introduce to world through the sizes of their families, remembering that the United States has one of the highest per-person emissions of greenhouse gases in the world and that smaller families will have smaller footprints than larger ones. To incorporate family planning into your climate change-related choices

26. **Support universal access to family planning education and medicine.**

27. **Choose limits for your family size.**

28. **Respect limits set by your children for the sizes of their families.**

### **Making a Difference & Coping with the Reality of Climate Change**

While we need to use our voices, our votes, and our choices as frequently as possible to fight climate change, we need to take care of ourselves to avoid burn-out. The truth is that we differ in our available time and energy and in our coping abilities. Further, distress and anxiety about climate change are normal responses once we open ourselves to the reality of our situation. The best ways to manage these responses are to take positive action concerning climate change and to do it in community. In so doing, we aren't giving in to despair and we aren't waiting for someone else to fix the problem. To gain climate change action information and as well as support from a community, consider joining one or more of the groups listed at the end of this handout. Finally, know that we all need to lift one another up as we work to fight climate change. We must celebrate the positive efforts of ourselves and others – whether big or small. Every step counts.

### **Resources for Fighting Climate Change**

Sources of Climate Change-Related Information:

- “An Inconvenient Truth,” a 97-minute documentary released in 2006 about former Vice President Al Gore's presentation of climate change science; though over a decade old, this

documentary provides a great overview of climate change science in a concise and understandable fashion.

- “Drawdown: The Most Comprehensive Plan Ever Proposed to Reverse Global Warming,” a paperback book released in 2017 that identifies the 100 most substantive global solutions to reverse global warming, based on careful research by leading scientists and policymakers around the world. See also Drawdown online at <https://www.drawdown.org/solutions>. In Seattle, see <https://drawdownseattle.org/> for local workshops presenting the Drawdown material and meetings discussing local implementation of Drawdown solutions.

#### Measuring your Carbon Footprint:

To learn about your carbon footprint, try working with the following greenhouse gas calculators:

- <https://www.taming-bigfoot.org/> - this calculator was used for the 2018 “Taming Bigfoot” competition in Seattle; to use the calculator, first register and then verify your email address.
- <https://coolclimate.berkeley.edu/calculator>

#### Groups to Join to Learn About and Take Actions to Fight Climate Change:

350 Seattle (Seattle, <https://350seattle.org/>) – Seattle chapter of 350.org, an international group seeking to end the age of fossil fuels and build a world of renewable energy for all.

Citizen’s Climate Lobby (Seattle & international, <https://citizensclimatelobby.org/>) – nonpartisan grassroots advocacy organization working toward adoption of fair, effective and sustainable climate change solutions, in particular carbon fee and dividend plans.

Climate Action Families (Seattle, <https://climateactionfamilies.org/>) – provides a way for the entire family to work together, in community, to explore and become proficient in climate justice work.

Earth Ministry (local & national, <https://earthministry.org/>) – organizes people of faith to advocate for strong environmental policies and provide strategic guidance to religious communities working toward environmental justice.

Faith Action Climate Team (Seattle, <http://www.1sustainableplanet.org/p/faith-and-climate-action.html>) – a climate change activist group of people of varying faiths who are trying to create the structures and policies for a sustainable planet for all future generations.

Faith-Based Groups – a number of faith-based organizations have groups that are active in the climate change fight; contact your worship community to locate such groups.

Fridays for Future (Seattle & international, <https://www.fridaysforfuture.org/>) – youth-led movement, started by Greta Thunberg, that protests the lack of action on the climate crisis.

Plant for the Planet – Washington State (statewide, <https://www.facebook.com/PftPWA/>) – Washington chapter of international, children-led movement that is fighting the climate crisis by planting trees around the world.

Sierra Club Beyond Fossil Fuels (Seattle & state, <https://content.sierraclub.org/coal/washington>) – taskforce that works to support initiatives to prevent coal and oil based energy and exports throughout the Pacific Northwest.

South Seattle Climate Action Network (Seattle, <http://www.southseattleclimate.org/>) – a community of citizens who seek to stop the climate crisis and achieve climate justice by community building, persuading our elected officials, and partnering with allied organizations.

Stand.earth (Bellingham, national & Canadian, <https://www.stand.earth/>) – advocacy organization that adopts outcome-driven strategies to demand that corporations and governments put people and the environment first.

Sunrise Movement (local & national, <https://www.sunrisemovement.org/about>) – a movement of younger people (age 14 to 35) to make climate change an urgent priority across America, end

the corrupting influence of fossil fuel executives on our politics, elect leaders who stand up for the health and wellbeing of all people, and create millions of good jobs in the process.

Calendar of Events:

Want to know about climate change actions in the Bellingham-Puget Sound-Portland area (Cascadia)? See Cascadia Climate Action's calendar at <http://cascadiaclimateaction.org/>. The calendar lists a number of (but not all!) educational events, activist events, and ways to use your voice to influence laws, regulation and policy.