

**WHAT YOU CAN DO: PART ONE:  
JOIN WITH OTHERS TO EXERT GROUP PRESSURE**

***Key actions to rise to the climate challenge***

1. First, get informed and then stay abreast of what's happening with our climate.
2. Get the big picture of the changes that need to happen.
3. Evaluate climate plans proposed by our legislators and candidates.
4. Choose a climate activist group or political group and join them.
5. Support one or more national environmental organizations.
6. Support legislation and legislators focused on ending our fossil fuel dependence.
7. Investigate and confront the activity of the fossil fuel Industry In your area.
8. Push your legislators to initiate and/or support legislation moving to 100% renewable energy by 2050 in your state and nationally.
9. Join with others to create a citizen's utility company.
10. Keep monitoring your current legislators and their climate action.
11. Support legislation to lower green house gas emissions by protecting and strengthening our natural environment.
12. Work for campaign reform.
14. Join forces with the movements to address income inequality, women's rights, gender diversity and racial, social and environmental injustice.
15. Create community.
16. Create Your Own Climate Support Group

***See the next pages for how to accomplish these actions.***

## **RIISING TO THE CLIMATE CHALLENGE**

*In 2018, The U.N. Intergovernmental Panel on Climate Change reported that Earth is currently projected to shoot past 1.5 degrees C warming over pre-industrial levels by 2030 and that this amount of warming will produce catastrophic climate disruption. **They called for reducing global carbon emissions by approximately half by 2030 and going to net zero by 2050!***

*According to the UN's 2019 Emission Gap Report, rather than lowering emissions, in the last decade global emissions have increased by 1.5% per year. Every year we wait the cuts we need to make get more extreme. As of 2019, we need to cut 7.6% per year to halve emissions by 2030, but if we keep increasing at the current rate, by 2025 the cut will have to be 15.5% for the next five years.*

*To make these kinds of cuts, we need radical changes in how we create and use energy, how we manage land, forests, and oceans, and how we modify our economy to take care of everyone. According to the IPCC it “will require rapid, far-reaching, and unprecedented changes in all aspects of society.” <https://www.ipcc.ch/2018>.*

*Nobody says it better than the youth leader Greta Thunberg:  
<https://www.youtube.com/watch?v=Ml3foKeZnsY>*

## **WHAT YOU CAN DO: PART ONE**

### **Join With Others To Exert Group Pressure**

Individual actions to lower one's carbon footprint continue to be very important (see the next section) but to create change on such a massive scale and in such a short time period we now need to coordinate our individual actions. Our governments need to hear our united voice. We recommend that you join at least one climate activist group and one environmental organization and that you activate the other organizations you belong to, as well as friends, family and colleagues.

#### **1. First, get informed and then stay abreast of what's happening with our climate.**

The U.N.'s Intergovernmental Panel on Climate Change (IPCC) is the lead scientific agency reporting on climate change. Visit the website below to get their latest reports:

<https://www.un.org/en/climatechange/reports.shtml>

Get the latest developments in climate science and climate activism. The Washington Post and the New York Times both have climate and environment newsletters. You

can get headlines free but have to be a subscriber for the full articles. Two excellent free news sources are:

Inside Climate News <https://insideclimatenews.org/>

Climate Change News <https://www.climatechangenews.com/>

The UN IPCC is generally thought to be conservative in its predictions. If you want a deeper analysis by some leading think tanks, consult:

World Resources Institute <https://www.wri.org/>

Climate Interactive <https://www.climateinteractive.org/>

Carbon Tracker Initiative <https://www.carbontracker.org>

Energy Innovation <https://energyinnovation.org>

## 2. Get the big picture of the changes that need to happen.

**Climate Interactive** has developed the **En-ROADS** climate simulation that you can access using the browser on your computer. It provides a list of all the major proposed actions that can bring emissions down such as: reducing use of fossil fuels in generating electricity, heating and cooling buildings, and transportation; increasing energy efficiency; subsidizing renewable energy; instituting a carbon tax or a cap and trade program; planting forests, etc.

You select the mix of actions and the level of intensity for each. The app then shows you what the level of global warming will be, given the mix you have selected. It is based on the major climate simulation models currently in use. It is very easy to use, and in the process of exploring different solutions you quickly learn a great deal. You can do it on your own or with a group and can even train to lead groups in exploring it.

<https://www.climateinteractive.org/tools/en-roads/>

**The Green New Deal**, a bill introduced in Congress by Senator Ed Markey and Representative Alexandria Ocasio-Cortez not only explores the many ways to bring down emissions and switch to renewable energy, but also how to redesign our economy to take care of our citizens as the necessary changes happen. In the future, there will be many other plans proposed but the Green New Deal is a good beginning—check it out.

<https://assets.documentcloud.org/documents/5729033/Green-New-Deal-FINAL.pdf>

**If you are a policy wonk:** **Energy Innovation** translates the various solutions into policies to be enacted by our governments in the book *Designing Climate Solutions: A Policy Guide for Low-Carbon Energy*. They also have an open-source energy policy

simulator (EPS) useful to estimate the economic and environmental impacts of hundreds of climate and energy policies.

<https://us.energypolicy.solutions/>

<https://energyinnovation.org/>

### 3. Evaluate climate plans proposed by our legislators and candidates.

To understand in some detail what's needed in a climate plan see our companion publication—**Assessing Climate Plans**—on our *Earth Rising Action* website. It poses key questions to ask legislators or candidates about their climate plans followed by examples of adequate answers. Reviewing it will prepare you to evaluate proposals made by our governments and legislators.

<https://earthrisingaction.org>

As an example, here are some beginning questions to ask your legislator:

**Do you agree that we are in a climate emergency, that fossil fuel burning is a primary cause, and that we have only about 10 years to drastically reduce emissions or global warming will exceed 1.5 degrees C above pre-industrial levels and produce catastrophic climate change?**

**What are the key components to your climate plan?**

**What targets for emission reduction** would you set for your (city, county, state, region, or nation)? (See Appendix on Understanding Targets.)

**How do you propose to bring down our fossil fuel-related emissions** in such a short time? What policies or regulations will you seek to enact? (See section 6 below for good answers.)

**How will you support the rapid development of renewable energy** and the infrastructure necessary to support it?

**What changes in forestry, soil management, and agricultural and fishing practices** do we need to initiate?

**Do you support the Green New Deal** in making an equitable transition to the new economy? What, in particular, seems important to you about it?

**What can we individual citizens do** to bring down our carbon emissions?

Note that legislators often offer very vague targets for emissions reduction that sound good such as “We will reduce our carbon emissions 40% over the 1990 levels by 2030.”

To evaluate this, first you need to know what measure of emissions they are using (carbon, carbon dioxide, or carbon dioxide equivalents), then what the amount of emissions was in 1990, and finally whether the reduction proposed is adequate. (See the Appendix for help in understanding targets further.)

As of December, 2019, the best available climate plan is the one proposed by Jay Inslee, Governor of the State of Washington.

Organizations Tracking Climate Plans of Candidates and Legislators:

<https://www.greenpeace.org/usa/climate2020/>

<https://350action.org/2020-tracker/>

#### **4. Choose a climate activist group or political group and join them.**

There are numerous progressive organizations that support climate activism. If you don't agree with their whole progressive agenda, support only their climate actions. Many are offering trainings in becoming a climate activist.

**The Citizen's Climate Lobby** trains volunteers in how to build relationships with elected officials, the media and their local community. Their focus is on legislation that collects a carbon fee on fossil fuels, which will then be distributed as a monthly dividend to all Americans.

<https://citizensclimatelobby.org/>

**Greenpeace** has been protesting in support of protecting the Earth since 1971. They are currently offering training to help concerned citizens organize local groups to work with getting out the vote for legislators who have strong climate policies. In addition they have five different environmental campaigns that need volunteer support.

<https://www.greenpeace.org/usa/>

**Our Revolution** is a progressive organization, which embraces the issues outlined by Bernie Sanders in his book by that name. Climate change is one of their most central issues. Their website provides a detailed outline of solutions for each issue. Local chapters keep members informed of important climate issues and actions as well as candidates and legislators who are climate champions.

<https://ourrevolution.com/issues/climate-change/>

**The Climate Reality Project**, lead by Al Gore, offers a free three day, in person, climate leadership training with Gore and a staff of scientists. The training focuses on climate science, communications and organizing. As a member of his Climate Leadership Corps you then work to spread awareness of the climate crisis and solutions.

<https://www.climateRealityproject.org>

**350.org**, created by Bill McKibben, has organized worldwide demonstrations and has many local chapters closely watching climate legislation. In addition, their website offers many resources for leading workshops, seminars and retreats with topics such as base-building, team-building, facilitation, strategy, etc.

<https://trainings.350.org>

**Fossil Free** is building a global movement to end the use of fossil fuels and transition to 100% renewable energy as quickly as possible. They offer training and resources to empower local community groups to run a fossil free campaign.

<https://gofossilfree.org/about/>

**Indivisible** has cultivated a grassroots movement of thousands of local Indivisible groups that work to elect progressive leaders and realize progressive policies. Each group may choose its focus, with a key one being Science and the Environment. Local chapters meet regularly to follow the latest climate issues and to take actions.

<https://indivisible.org/>

**Young people everywhere have begun to organize**, and three groups are especially out front: **Sunrise Movement**, **Fridays For Future**, and **Extinction Rebellion**.

**Sunrise Movement** is a U.S. based organization founded to lobby for the Green Deal. They focus on the development of clear, nonpartisan policy goals. Members work within existing political structures, pressuring politicians to take more active stances on the issue of climate change and to reject donations from fossil-fuel entities. They are also focused on getting out the youth vote.

<https://www.sunrisemovement.org/>

**Extinction Rebellion (XR)**, based in the UK, employs civil disobedience to demand action from government. They use nonviolent actions such as blocking roadways or gluing themselves to buildings and seek to cause mass economic disruption. They call for governments to declare a Climate Emergency and to communicate the scope of this emergency with the public. They are also demanding policies to reach zero emissions and reduce overall consumption by 2025 and that a citizens' assembly be created to oversee these efforts and ensure that the voice of the people leads to the necessary changes.

<https://rebellion.earth/>

**Fridays For Future** is an international movement started by Greta Thunberg. It calls for youth to “climate strike” by skipping school every Friday to protest the lack of movement by governments on climate change. There are many local chapters.

<https://www.fridaysforfuture.org/>

**Republican Climate Action Initiatives:** House Resolution 195 was introduced in 2017 by a group of 20 Republican House Members led by Reps. Elise Stefanik, Carlos Curbelo, and Ryan Costello. It was focused on conservative principles “to protect, conserve, and be good stewards of our environment, responsibly plan for all market factors, and base our policy decisions in science and quantifiable facts on the ground.

If you care deeply about the climate crisis but disagree with the progressive agenda, you could connect with the sponsors of this resolution, seek to create a new climate action group within the Republican Party or check out ConservAmerica (formerly Republicans for Environmental Protection) and the American Conservation Coalition.

<https://www.conservamerica.org/>

<https://www.acc.eco/>

**Join a conversation to bridge our divides.**

Several organizations focus on bringing people together to increase understanding and respect for each other. You can join an event or host one. Check out Make America Dinner Again (MADA) which brings liberals and conservatives together over dinner. Another worthy project is Living Room Conversations, which offers guides to supporting discussion on over 80 different topics.

<http://makeamericadinneragain.com/>

<https://www.livingroomconversations.org/>

**In addition to these organizations,** there are now some major movements that are coalescing to awaken people to the urgency of the climate crisis:

**America’s Climate Pledge** is a collaboration of cities, states, businesses and universities to respond to the climate emergency by bringing down greenhouse gas emissions consistent with the goals of the Paris agreement. Former California Governor Brown and former NYC mayor and businessman Michael Bloomberg established it in 2017.

<https://www.americaspledgeonclimate.com/>

**TED Countdown** is a new global movement established through TED and Future Stewards to awaken citizens worldwide to the challenge of the climate crisis.

<https://countdown.ted.com/>

<https://www.theverge.com/2019/12/4/20994401/youtube-ted-climate-change-united-nations-countdown-streaming-video>

Click here: <https://bit.ly/2MhXXq8>

**The Leap** was established by journalist Naomi Klein, based on her experience of bringing a coalition of diverse activists together in Canada. It is now oriented toward supporting the Green New Deal in the United States.

<https://theleap.org/>

**World War Zero** John Kerry, the former senator and secretary of state, and Arnold Schwarzenegger, former California governor, are seeking to create a broad new coalition of people concerned with the climate crisis and to launch a public education campaign to elevate responding to climate change among public priorities. The coalition includes persons of influence such as military leaders, CEOs, political leaders, and Hollywood celebrities. Included are persons such as the Clintons, Madeline Albright, Leonard DiCaprio, Susan Rice, Al Sharpton, etc.  
<https://worldwarzero.com/>

### **5. Support one or more national environmental organizations.**

Of course, the national environmental organizations have been and continue to be at the forefront of fighting for the health of our planet. Consider what issues mean the most to you and join one or two of the many national environmental organizations that focus on that issue. Many have local groups, where you can meet with others and work on issues near you. They can keep you informed and offer opportunities to sign petitions and participate in group actions. You can see evaluations of them and other organizations of your interest at  
<https://www.charitynavigator.org>

Some of the top organizations are:

Sierra Club <https://www.sierraclub.org>

Earth Justice <https://earthjustice.org/>

Environmental Defense Fund (EDF) <https://www.edf.org/>

National Resource Defense Council (NRDC) <https://www.nrdc.org>

Friends of the Earth (FOE) <https://foe.org/>

Greenpeace <https://www.greenpeace.org/usa/>

The Nature Conservancy <https://www.nature.org/>

World Wildlife Fund (WWF) <https://www.worldwildlife.org/>

Ocean Conservancy <https://oceanconservancy.org>

Waterkeeper Alliance <https://waterkeeper.org>

American Rivers <https://www.americanrivers.org/>

Food and Water Watch <https://www.foodandwaterwatch.org>

Union of Concerned Scientists <https://ucsusa.org>

Environmental Working Group (EWG) <https://www.ewg.org>

(Note that Naomi Klein, an environmental leader, has argued that some of these organizations in seeking effective collaboration with the corporate world have supported cap and trade and carbon offset initiatives that have not been effective in bringing emissions down. Rather, she argues, they have allowed corporations to continue to profit from the fossil fuels while appearing to be “green.”)

## **6. Support legislation and legislators focused on ending our fossil fuel dependence.**

*Here are some recommended legislative actions ranging from seemingly extreme (but probably necessary) to more moderate:*

**Legislate to stop or radically limit all mining, drilling and fracking, as well as refining, using, and exporting fossil fuels.** The most radical of all possible actions, this is the only sure way to bring the fossil fuel era to an end.

**Stop building all new fossil fuel Infrastructure and extraction projects.** As long as the industry builds new refineries, pipelines, etc. they are extending fossil fuel use far into the future.

**Evaluate carbon tax, carbon cap and trade and/or carbon offset programs.** At the moment, taxpayers are footing the bill for the damage to health and environment caused by fossil fuel emissions. We need to put a price on carbon emissions for all industries and sectors of the economy. The IPCC states that wherever the beginning price is set it must increase yearly and be at \$135/ton by 2030 to avoid moving into catastrophic global warming.

A carbon tax sets a definite price on every ton of greenhouse gas emissions produced. In carbon cap and trade programs the price is at least partially market-based. Cap and trade programs begin by issuing or auctioning a set of allowances (credits) to pollute each year.

A cap is established on the total emissions allowed per industry and that cap is supposed to be lowered each year. Corporations that do well in bringing down their emissions can sell them on a secondary market. See the discussion of pros and cons of each at:

<https://www.wri.org/blog/2016/03/carbon-tax-vs-cap-and-trade-what-s-better-policy-cut-emissions>

Click here: <https://bit.ly/35LX3d9>

Unfortunately both of these measures can be “gamed” by corporations to provide them with profits without having to substantially reduce their emissions.

Carbon offsets allow a corporation to continue to emit greenhouse gases in their home country while investing in a tree plantation or a renewable energy project elsewhere. Often these projects have been done in developing countries in a way that is detrimental to the interests of its people.

<https://www.ienearth.org/wp-content/uploads/2017/11/Carbon-Pricing-A-Critical-Perspective-for-Community-Resistance-Online-Version.pdf>

Click here: <https://bit.ly/2sV4csQ>

Despite the concerns mentioned above there is promise in these programs if they are carefully designed and managed. If your state already has a carbon tax, a cap and trade program, or carbon offsets program and/or participates in a regional program, seek out evaluations of how effective it has or hasn't been. If it doesn't have one, support legislative efforts to establish one for your city, county, state or national government.

(Note: While cap and trade has been successful in California and somewhat successful in the U.S.'s Northeast Regional Group, the largest one by the European Union (EU ETS) has failed to bring down emissions. The IPCC's Congress of the Parties (COP) 25, held in December 2019 in Madrid, was supposed to come up with rules to set up and govern a global cap and trade system. However, they were unable to agree on the rules to manage it. )

**Regulate fossil fuel use in electricity generation** by requiring that states establish renewable portfolio standards that specify percentages of renewable energy to be used in electricity generation.

**Establish energy efficiency standards in addition to those for electricity generation.**

We need to also regulate emissions from transportation, from heating and cooling buildings, from inefficient appliances, from industrial manufacture (especially cement), and from agriculture.

**Require fossil fuel companies and companies with significant investments in fossil fuel companies to reveal the extent of their investments, and publish advice to their investors identifying the extent of their exposure to financial risk.**

The fossil fuel industry is supported by many of our large banks and insurance companies and is part of many mutual funds.

For example from 2016-2018, Goldman Sachs, Wells Fargo, Citigroup, Bank of America and Morgan Stanley together conducted \$709.63 billion in fossil fuel financing.

<https://www.washingtonpost.com/news/powerpost/paloma/the-energy-202/2019/12/17/the-energy-202-goldman-sachs-rules-out-financing-for-arctic-drilling-will-other-u-s-banks-follow/5df7d2c2602ff125ce5b503b/>.

Click here: <https://wapo.st/34O5LGm>

Note that these investments are participating in what will likely prove to be a “carbon bubble.” Fossil fuel companies count oil, gas and coal reserves still in the ground as assets on their balance sheets. As our governments become more aware of the relationship between global warming and fossil fuels, these supposed assets will be unburnable and stranded and so constitute a risky investment not unlike the housing and other investment bubbles.

<https://greenamerica.org/divest-reinvest>

<https://gofossilfree.org/how-to-divest/>

**Watch for legislation supporting the fossil fuel industry and ask your representative to confront it.** ALEC (The American Legislative Exchange Council) brings conservative state legislators and private sector representatives together to draft templates for state-level legislation often either opposing renewable energy or supporting fossil fuel projects. Their legislation has been introduced successfully in many state elections. Find out which if any of your state legislators are members of ALEC and watch their legislative “moves.”

**Reform the tax codes, loopholes, subsidies and trade deals that support the fossil fuel industry.**

**Eliminate subsidies and tax loopholes** that support the fossil fuel industry. According to the International Monetary Fund (IMF), fossil fuel subsidies alone amounted to \$5.7 trillion in 2017. Turning to taxes: Chevron paid zero dollars in federal income taxes in 2018 while making more than \$4.5 billion in profits. The oil, gas and pipeline industry paid 3.6% in effective corporate tax rates in 2018.

Institute on Taxation and Economic Policy

<https://itep.org>

**Watch for trade deals** that allow countries to sue local environmental projects by claiming they would constitute unfair competition for their global companies.

<https://thischangeseverything.org/the-price-of-free-trade-is-unchecked-climate-change/>

Click here: <https://bit.ly/2QGlzpN>

To dig into the details:

<https://www.eesi.org/papers/view/fact-sheet-fossil-fuel-subsidies-a-closer-look-at-tax-breaks-and-societal-costs>

Click here: <https://bit.ly/2MAZMhf>

## **Confront the ties between your legislator and the fossil fuel industries.**

Push your legislators and candidates to sign the “No Fossil Fuel” pledge. See:

<http://nofossilfuelmoney.org>

and

<https://www.sunrisemovement.org/nofossilfuelmoney>

You can track the flow of money from the oil and gas industries to Congress by consulting “Open Secrets” maintained by The Center for Responsible Politics. It provides a list of the top 20 legislators receiving funds as well as all others.

<https://www.opensecrets.org>

**If you are a Republican** concerned about climate change:

Check to see if your legislator has signed the Americans for Prosperity “no climate tax” pledge and if so, pressure him/her to remove that signature and call to others to do so.

<http://site.americansforprosperity.org/noclimatetax/>

### **7. Investigate and confront the activity of the fossil fuel Industry In your area.**

You may be living with a refinery nearby, or one in the planning stage.

There is an upsurge of fracking and drilling, and it might be happening in your backyard.

There may be oil or gas pipelines crossing lands nearby. (And of course there may be a line delivering gas to your home.)

You may not realize that trains carrying coal, gas or oil are passing through your neighborhood regularly. Likewise our ports are a place where we both import and export fuels.

Of particular concern: coal is transported in open-top railroad cars, allowing dust from the coal to become airborne and inhaled or to land on nearby surfaces, where it can become a fire hazard.

Find out what legislators are in support of these projects and let them know your objections with letters, calls, and votes.

Join with local organizations protesting against these activities.

To get the overall picture of fossil fuel extraction and transportation see the following video. (Be aware that it has a pro-fossil fuel bias.)

<https://www.youtube.com/watch?v=MEIerHQglAw>

The Frackracker Alliance monitors fossil fuel extraction and renewable energy projects—state by state, nationally and internationally. You can look at a map of the entire U.S. and find out what is happening in your area including key legislation. You can also download their FracTracker App to your mobile phone or computer.

<https://www.frackracker.org/>

<https://www.frackracker.org/apps/>

### **8. Push your legislators to initiate and/or support legislation moving to 100% renewable energy by 2050 in your state and nationally.**

Getting off fossil fuels is only half of the story. Moving into renewable energy is what makes it possible. While the target the UN calls for is net zero by 2050, a better target is to get our energy entirely from renewable sources by that date. How can we do that? By policies that establish the following:

**Specific targets** for your city, county, state or the nation to switch to 50% renewable energy by 2030 and 100% by 2050.

**Strong governmental grant programs** for research and development as well as to fund infrastructure for solar, wind, geothermal, and tidal energy generation and battery storage and transportation.

**State and federal rebate** programs providing incentives to install solar or wind.

**Net metering:** Allowing citizens with solar, wind or geothermal generators to feed electricity into the grid and receive monetary credit for it.

**Feed-In tariffs:** Long term contracts between utility companies and renewable energy providers that offer guaranteed prices, thereby providing security for investment.

**Renewable portfolio standards:** Governmental programs which require utility companies to buy a certain percentage of their electricity from renewable sources.

**Community choice aggregation:** Allowing citizens to join together to create their own utility company which then uses energy only from renewables.

**Incentive programs for hybrid and all-electric cars and trucks,** as well as for **Public transportation programs using renewable energy** such as hi-speed rail and buses.

For a Republican perspective on moving to renewables see:  
Conservatives for Energy Freedom  
[http://energy\(Ffreedomusa.org/](http://energy(Ffreedomusa.org/).

(Note: zero emissions is what we should aim for because net zero assumes that while there still will be emissions somehow we will offset them with carbon removal projects which do not yet exist on the scale that would be needed.)

#### **9. Join with others to create a citizen's utility company.**

Consider what sources of renewable energy are available in your area and join with fellow citizens to create a power company that is built on those resources. It might be a city project, a county project, or simply a neighborhood project.

Marin Clean Energy in Marin, California or East Bay Community Energy in the San Francisco East Bay area can serve as a guide.

<https://ebce.org/>

<https://www.mcecleanenergy.org/>

#### **10. Keep monitoring your current legislators and their climate action.**

Consult **350.org** or **Greenpeace's 2020 Scorecard** which rate the climate plans of the Presidential candidates.

Watch the voting records of local, state and national legislators.

**GovTrack.US** is an independent website that tracks the U.S. Congress. They publish the ongoing status of federal legislation by topic and with it you can focus on specific bills and resolutions concerning the climate. For each, there is an analysis of the pros and cons, as well as how congressional representatives and senators have voted on this legislation.

<https://www.govtrack.us/>

**Californians** can go to their state's **Climate Change Portal**. Possibly your state or country has a similar way to track climate action legislation.

<https://www.climatechange.ca.gov/state/legislation.html>

#### **11. Support legislation to lower green house gas emissions by protecting and strengthening our natural environment.**

While getting out of fossil fuels and switching to renewable energy are essential to protecting our planet, there are many other important issues we face to counteract the damaging effects of our activities on the environment.

## **Conserve natural resources**

Each of us can find ways to conserve personally, but in addition we really need governmental action. Every new product requires energy in manufacturing and transporting it, plus water and chemicals as well as the natural materials in its structure and its packaging. All this, and it often ends up in the trash. Push for legislation to establish efficiency and zero waste policies. Require 100% recycling of all packaging. Require manufacturers to build products that can be taken apart, repaired and re-used. Limit food waste by supporting collaboration between groceries, restaurants and food banks. Require local governments to provide composting facilities.

## **Protect the EPA**

The Environmental Protection Agency, which is charged with protecting our natural resources, has been under attack from the Trump administration. The Clean Water, Clean Air, and Endangered Species Acts are all under siege.

National Geographic maintains a running list of how President Trump is changing environmental policy and can keep you updated.

<https://www.nationalgeographic.com/news/2017/03/how-trump-is-changing-science-environment/>

**Click here:** <https://on.natgeo.com/2QzmiJg>

When the administration takes an action, they are required to call for public comment. Become aware of the issues and be sure to register your concerns.

## **Support “blue carbon” legislation that establishes marine preserves and which protects mangroves and sea grasses, which are potent carbon dioxide absorbers.**

As you probably know our oceans are becoming acidic from absorbing carbon dioxide and as a result phytoplankton, which generate about 40% of our oxygen, are dying. In addition, many forms of marine life at the base of the food chain are unable to create their shells in this acidic environment, and coral reefs are dying.

You will see the fossil fuel industry argue for carbon sequestration plants to remove CO<sub>2</sub> from the air and place it underground. At this point, this is highly speculative and not shown to be reliable. However, there is much that can be done by working with the natural world to absorb carbon dioxide.

Mangroves and sea grasses are potent absorbers of carbon dioxide. We can protect what we already have and plant more.

**Move to protest and regulate plastic production.** Support legislation against single-use plastic bags and packaging. Strengthen recycling. The many plastic items we discard never biodegrade but simply break down into smaller and smaller pieces. These pieces get into our soil, rivers, and oceans. It becomes a kind of soup in the ocean, which seabirds and fish eat. When we consume seafood and fish it ends up in our own bodies.

Yale University's environmental newsletter reports that fossil fuel companies facing the prospect of reduced demand for their fuels are building a host of new petrochemical plants that convert oil, gas, and feedstock ethane into plastic. "They are pouring billions of dollars into new plants intended to make millions more tons of plastic than they now pump out."

<https://e360.yale.edu/features/the-plastics-pipeline-a-surge-of-new-production-is-on-the-way>

Click here: <https://bit.ly/2SLgeQK>

### **Protect our forests and plant trees**

Forests absorb carbon dioxide and emit oxygen. Some of the world's most important forests in the Amazon and Indonesia are being cut down and burned to make room for cattle, soy, or palm oil plantations, or for drilling and mining. We must fight this deforestation. We also need to plant more forests (afforestation) to help remove carbon dioxide from the air. The UN has called for planting one trillion trees!

### **Call for agricultural methods that restore soil rather than deplete it**

Soil is not just "dirt" but an ecosystem rich with worms, decaying plant matter, fungi, bacteria, and more. It is this ecosystem that naturally powers the growth of plants. However, industrial agricultural methods of tilling and then planting one mono-crop over vast acreage deplete the soil. Once the generator of life, soil degrades into a sponge-like substance, which then requires synthetic fertilizers. Then, to protect these monocrops from being wiped out by a single pest, vast amounts of pesticide are used. Fertilizers and pesticides then run off into rivers, lakes, and oceans where they do further damage. Support legislation to switch to modern agricultural methods that restore the soil using crop rotation, minimal tilling, and more.

**Watch zoning and land use regulation** of your city, county, state, and nation to see if forests are being cut down or protected and planted, if natural resources are being conserved, and if the environment is being protected against damaging development and inappropriate agricultural uses.

**Call for regulation of industrial agriculture's pollutants** including manure, excessive use of nitrogen fertilizers, and poisonous herbicides and pesticides, all of which pollute our rivers, lakes and oceans.

### **Move subsidies for meat and dairy industries to vegetables and fruits.**

According to recent data from Metonomics, the American government spends \$38 billion each year to subsidize the meat and dairy industries, but only 0.04 percent of that (i.e., \$17 million) each year to subsidize fruits and vegetables. In the UN's 2019 report on the relationship between how we use land and climate change, they call for a switch to *“Balanced diets featuring plant-based foods, such as coarse grains, legumes, fruits and vegetables and animal-sourced food produced sustainably in low greenhouse gas emission systems...”*

<https://www.ciwf.org.uk/news/2019/08/un-report-calls-for-less-meat-and-dairy>

There are many organizations watching legislation and legislators regarding these issues including:

<https://www.foodandwaterwatch.org/>

<https://www.ewg.org/>

<https://oceanconservancy.org>

### **12. Work for campaign reform.**

The power that the corporate world exerts on our legislators is only possible because they are dependent on raising vast sums of money to bring their message to us.

The Supreme Court decision in *Citizens United v. Federal Election Commission* opened the floodgates for unlimited amounts of money to be poured into political campaigns, setting up the conditions for billionaires to take over the democratic process. It was decided that the government cannot restrict the spending of corporations, unions and other groups for political campaigns, as it is their First Amendment right. And, while it has increased the visibility of this issue, it is only the latest step in defining corporations as “persons” with rights.

Clearly a major way that this money's influence is exerted is through the purchase of advertising. One way we can counteract this force is by exerting our ownership of the airwaves that bring these messages to us. As taxpayers and citizens, it is within our power to insist that each candidate be given sufficient time--at no cost--to bring his or her message forward. Collaborate with organizations already working in this area.

<https://www.commoncause.org>

<https://sunlightfoundation.com/?s=campaign+reform>

<https://www.aclu.org/issues/free-speech/campaign-finance-reform>

<https://www.followthemoney.org/resources/organizations>

<https://www.poclad.org/about.html>

### **13. Work for “One Person, One Vote.”**

There are many policies that interfere with making our individual votes count.

**Gerrymandering**, done by both parties, arranges voting districts so that a particular party or demographic such as a political, ethnic, racial, linguistic, religious, or class group is helped or hindered. It can greatly affect who is voted into office.

<https://www.americanprogress.org/issues/democracy/news/2019/10/01/475166/impact-partisan-gerrymandering/>

Click here: <https://ampr.gs/2Qyxdmw>

### **Electoral College instead of popular vote count.**

As we have seen in the Trump election, the popular vote and the vote of the Electoral College can be very different. While in some states the electors follow the popular vote they are not required by constitution to do so and they don't in some states. As a result a presidential candidate can win the Electoral College as did Bush and Trump while losing the popular vote to Gore and Clinton. As of this moment in history, the Electoral College seems to favor the states that are most resistant to rising to the climate challenge.

<https://www.makingeveryvotecount.com/mevc/2019/5/15/electoral-college-system-encourages-climate-change>

Click here: <https://bit.ly/36QuvPQ>

<https://www.washingtonpost.com/news/energy-environment/wp/2016/12/19/the-electoral-college-is-thwarting-our-ability-to-battle-global-warming/>

Click here: <https://wapo.st/35JJLhm>

### **14. Join forces with the movements to address income inequality, women's rights, gender diversity, racial, social and environmental injustice.**

As we work to confront the climate challenge, some of us get siloed into believing that climate is the only important issue to address. But in reality, the way we treat the environment is the same way we have been treating each other and is echoed in racism, economic and climate injustice, neglect of women's rights, and disregard for gender diversity. In many ways, each of these issues is a reflection of the same issue—a focus on exploitation and profit and a disregard for the people and creatures of the world. We need to come together rather than compete against each other. We need to unite our efforts.

The Green New Deal embodies this concern. See Naomi Klein and her book and film, *This Changes Everything*, as well as her new book: *On Fire: The (Burning) Case For A Green New Deal* as well as The Leap Manifesto. All offer much insight into the interconnection of all these issues.

<https://naomiklein.org>

<https://leapmanifesto.org/en/the-leap-manifesto/>

<https://theleap.org>

Charles Eisenstein has written extensively on the separation myth that is the source of much of our culture's social and economic policies and has recently emphasized the importance of expanding our focus beyond climate.

See his books: *Sacred Economics*, *The Climate Story*, and *The More Beautiful World Our Hearts Know is Possible*.

<https://charleseisenstein.org/>

## **15. Create community.**

We are already in a “new normal” with regard to climate change. To survive and then thrive we will need to build community. There are many ways to do this.

There is now a worldwide movement of creating local Transition Towns to create resilient communities. Neighbors join together to reduce their carbon emissions, develop alternative energy, share resources, grow food, and provide help and support.

There is also the Resilient Teams concept created in Marin County, California that can provide a model for your neighborhood to follow.

Find out if there is already such a community organizing in your area and if not, help to create one. At a time of disaster, it is your neighbors that you need most.

<https://www.transitionus.org>

<https://www.resilientneighborhoods.org/>

There are many online tools to begin to build community. Nextdoor is a particularly useful one that helps you connect with your neighbors.

<https://nextdoor.com/>

Many are joining together to create live-in and work communities—an updated, hopefully improved version of the commune.

There is an incredible wealth of books now available on creating community. In truth there are too many to cite here. Perhaps begin here:

<https://bookauthority.org/books/best-community-building-books>

In addition, there are many online tools for finding like-minded people to think and create together. One that offers a host of such opportunities is Meetup.

<https://www.meetup.com/>

## **16. Create Your Own Climate Support Group**

Finally, it takes a lot of courage and fortitude to look with clear eyes into the climate

emergency facing us. We need the support of others as we confront our fears, anger, and sadness. A very powerful thing to do is bring together about 8 people and hold a monthly Climate Wisdom Circle. The purpose of the meeting is to give each person time to explore their thoughts and feelings about the climate challenge and how they are responding to it. People meditate, sit in silence, then when moved, speak from their depth.

*Wisdom Circles: A Guide to Self-Discovery and Community Building in Small Groups*  
By Charles Garfield and Cindy Spring

Also, Joanna Macy has long worked with groups to confront their grief about climate change. Most recently she has offered her new book authored with Chris Johnstone, *Active Hope: How To Face The Mess We're In Without Going Crazy*, as well as trainings in how to conduct groups on this topic.

<https://www.activehope.info/joanna-macy.html>

***In closing: while this moment in time is requiring us to join forces to push our governments to respond effectively to the climate emergency, we still need to reduce our individual carbon footprints. As we adopt a more low carbon lifestyle and change our consumer choices, it will exert influence on the behavior of corporations by affecting their bottom lines. So check out:***

***What You Can Do: Part II and learn how to shrink your personal carbon footprint!***  
Available at <https://earthrisingaction.org>

## APPENDIX

### Evaluating Targets for Emission Reduction

Often a legislator will make a vague statement such as “I would lower emissions by 40% below the 1990 level by 2030.” To evaluate this proposal you would need to know if he or she referring to carbon dioxide (CO<sub>2</sub>) or carbon dioxide equivalents CO<sub>2</sub>e (includes other greenhouse gases), what the emissions level was in 1990, and finally whether the target will be low enough to keep warming to no more than 1.5 degrees Centigrade above pre-industrial levels.

In the chart on the next page you can see what emissions were globally, in the E.U., in the U.S., and in California for some many of the years typically used as the baseline from which the reduction will be made. Use it to evaluate proposed targets.

For those who are not mathematically minded: If the proposed target is to reduce emissions by 40% below 1990 levels by 2030, all you have to do is find the number of tonnes shown in

the table below for what was emitted in your region in 1990. Simply multiply that number by .60% (since that is what will be left after the 40% reduction has been made. The number you get is the target amount that was proposed for 2030. The IPCC has told us that we must reduce emissions by 50% below 2018 levels by 2030 to avert catastrophic climate change. Find out what the 2018 level was in your region. (Sorry we haven't provided that.) Does the target suggested meet that 50% reduction?

If not, write, speak, organize, and protest. Insist that your government's actions must be strong enough to meet the climate emergency.

### Translating Emissions Reduction into the Actual Tonnes of Carbon Dioxide Equivalents (CO<sub>2</sub>e) for the Target Year

**CO<sub>2</sub>e Tonnes Emitted in Baseline Years: Globally, in E.U., U.S. and California**

|           | 1990  | 2000  | 2005  | 2010  | 2012  | 2013  | 2014 | 2030<br>Projected<br>If<br>business<br>as usual | 2050<br>Projected<br>If<br>business<br>as usual |
|-----------|-------|-------|-------|-------|-------|-------|------|---|---|
| Global Gt | 37 Gt | 40 Gt | 45 Gt | 49 Gt | 54Gt  |       |      | 78 Gt   | 101 Gt  |
| U.S. Mt   | 6,397 |       | 7379  | 6986  | 6643  | 6800  | 6871 |   |   |
| E. U. Mt  | 5750  | 5293  | 5355  | 4918  |       | 4611  |      |   |   |
| CA Mt     | 431   | 468.8 | 488.2 | 456.0 | 460.8 | 459.3 |      |   |   |

Global figures are from Climate Interactive's Scoreboard. Projections are based on business as usual scenarios in the absence of additional climate policies and assuming country pledges would not be implemented. U.S. emission figures are from the U.S. Environment Protection Agency (EPA). EU figures are for 28 countries and come from the European Commission's Eurostat Department. CA figures from California Air Resources Board: *California Greenhouse Gas Inventory 2015 Edition*. See reference section for links.

### Understanding the Language and the Metrics Used in Climate Reports

Scientific reports refer to degrees of warming in Celsius not the U.S. measure of Fahrenheit. Note that there is a difference between converting the temperature of any given day from Celsius to Fahrenheit vs. converting the degrees of warming. For the degrees of warming, to convert C to F, multiply by 1.8. For example, 2 degrees Celsius is equal to 3.6 degrees Fahrenheit.

GHG refers to greenhouse gases and includes: carbon dioxide, methane, nitrous oxide, ozone, chlorofluorocarbons and hydrofluorocarbons.

The weight of greenhouse gases is expressed in "tonnes," which refers to metric tons. Scientific reports use the metric number. One tonne equals 1.102 U.S. tons ("short" tons) or 2,200 U.S. pounds.

When reports refer to world-wide emissions they are expressed in "gigatonnes" which is abbreviated as Gt.

A gigatonne is 1 billion tonnes or 1,000,000,000 tonnes. Our global carbon budget is sometimes expressed as 1 trillion tonnes, or 1,000x a billion or 1,000,000,000,000 tonnes.

Typically the emissions of countries or regions are measured in millions of tonnes (Mt) (1,000,000,000) also called a megatonne (used to mean a measure of weight, not the frequent use of the term as a measure of explosive power.)

There are three different ways to measure tonnes of emissions: by the weight of C (tonnes of the element carbon contained in carbon dioxide), CO<sub>2</sub> (tonnes of the molecule CO<sub>2</sub>) which is heavier due to the two oxygen atoms per carbon atom, or CO<sub>2</sub>e (tonnes of CO<sub>2</sub> equivalents), which includes the other greenhouse gases as well.

If you read different reports you may see figures that don't correspond with each other. To go from a measure of C you must multiply by 3.67 to get CO<sub>2</sub>.

How we use land and the availability of the natural "sinks" such as the ocean or forests which absorb carbon dioxide can influence greenhouse gas emissions.

For this reason, many reports also list an emissions figure that has included the net result of both land emissions and sinks in "Land Use, Land-Use Change, and Forestry" or LULUCF.

Since it is a matter of the balance between emissions and sinks, the net emissions can be raised or lowered when taking into account these land issues. For example, were forests cut down or were they planted? However in the figures above, and often in other figures, LULUCF has not been included.

### **Additional Publications of Earth Rising Action Network:**

***Take Back Your Power—Your Economic Power—to learn how to do it!***

***Assessing Climate Change—to find the questions to ask your legislators or candidates about their climate plans and to learn what would be an adequate answer.***

***Films—to start a climate circle focused around viewing and discussing a documentary related to global warming and its causes.***

***Resources—for more access to individuals, groups and organizations working with these issues.***

***Citizen's Guide to Climate Change: What Causes It, What to Do About It—to get the big picture.***

All available or soon to be available at <https://earthrisingaction.org>