What can you do?

These ACTIONS not only help the environment, but can also save YOU money!

Top actions to reduce your carbon footprint: 1) Stop appointing people with no experience to government positions in the environmental or energy field 2) Stop GreenWashing 3) Vote with your wallet 4) Have one fewer child 5) Live car-free 6) Avoid airplane travel 7) Eat a plant-based diet	See this paper for more information: http://iopscience.iop.org/article/10.1088/1748-9326/aa7541/pdf

Residential Actions		
Around the home		
	Appliance use	Wash clothes in cold water, Run full dishwasher and wash machine, Hang dry clothes
	Bags	Reuse shopping bags or plastic bags
	Beverages	Reuse cups and water bottles, skip the straw
	Bills	Pay bills online and go paperless
	Clothes	Sustainable fashion-great NPR podcast: https://www.npr.org/2021/03/14/975728474/5-tips-to-ditch-fast-fashion-and-cultivate-a-sustainable-closet
	Electronics	Put your electronics like your TV and DVD player on a power strip and turn off when not in use.
	Home Retrofit	Home retrofit programs include incentives for a bundle of demand side management improvements, including, but not limited to: home weatherization, appliance upgrades, lighting retrofits, and installation of technologies that enable demand response (e.g. home energy management systems and sensors, programmable communicating thermostat).
	HVAC Controls	Wi-Fi connected programmable communicating thermostats can be enabled to receive a demand response signal during an event, provide the customer with long-term efficiency savings, and respond to time-based rates via automated controls and sensors.

	Lightbulbs	When you change a lightbulb, replace all incandescent bulbs with LEDs.
	Recycling	Find your local recycler to see what they accept. Just because the item is paper or plastic, this does not mean that you can simply recycle it. There has to be a market for your recycling. The first step of the 4 Rs is Rethink. China is no longer going to be the world's dumpsite.
	Thermostat	When it's cold outside, keep your thermostat set lower than normal (e.g., 65□F instead of 70□F); when it's hot outside, keep your thermostat set higher than normal (e.g., 75□F instead of 70□F).
	Water	Stop drinking bottled water; install a water filter or buy a water pitcher purifier
Personal Finance		
	Divest	Divest your shares and put your money into a socially responsible fund.
	Invest and voice your concerns	Invest in fossil fuel companies and then vote, attend meetings, and voice your concerns about the damage they are causing.
	Invest in companies who share your motives	Invest directly in companies whose climate change policies and actions you approve.
The Forum for Sustainable and Responsible Investment is the leading voice advancing sustainable, responsible and impact investing across all asset classes. Great resources created by them: https://www.ussif.org/howdoisri		
Civic Actions		
	Get involved and use your voice as an informed citizen	Spread awareness, Influence employer's actions, Influence school's actions, Vote, and Write a letter to elected officials and companies
Green Energy		
	Advanced Solar Inverters	Smart solar inverters are capable of sending and receiving data from the utility or third-party aggregator systems and providing advanced grid functions, such as ramp rate control, power curtailment, fault ride-through and voltage support.

	Battery Storage	Battery storage combined with distributed generation could provide greater grid stability and optimize behind the meter resources. If paired with a time-based rate, storage can also take advantage of energy arbitrage opportunities.
	Distributed Generation	Install solar photovoltaic panels or small wind turbines. Use EnergySage's Solar Calculator, Solar Empower Solar Calculator, or NREL's PVWatts Calculator for estimates.
	Install Efficient Water Heaters	Heat pump water heaters (HPWH) use electricity to move heat from one place to another instead of generating heat directly. Therefore, they can be two to three times more energy efficient than conventional electric resistance water heaters. Additionally, HPWH have demonstrated that they are capable of providing demand response services. Grid-interactive water heaters (GIWH) add bi-directional controls to electric resistance water heaters. GIWH are capable of allowing the utility or third-party aggregator to rapidly and repeatedly turn them on and off or incrementally ramp their power up and down. This control creates an opportunity to utilize the GIWH as a thermal storage unit that can respond on demand to dispatch signals.
	Purchase Carbon Offsets	Carbon offsets (typically by the ton) are reductions in emissions of carbon dioxide or greenhouse gases (GHG) made in order to compensate for or to offset emissions created by driving your car, flying, running your air conditioning, etc. When you buy an offset, you fund projects that reduce GHG emissions. Before you buy, don't greenwash. Reduce your impact first. If you insist, make sure that when you buy offsets, they are verified!

	Purchase Renewable Energy Certificates (RECs)	When electricity is generated – either from a renewable or non-renewable power plant – the electrons added to the grid are indistinguishable. RECs are used to track renewable electricity from the point of generation to the consumer. RECs represent the environmental benefits of one megawatt-hour of generation and can be sold separately or together with the underlying electricity. Use the Environmental Protection Agency's Green Power Partnership for great resources including finding the best green power resource for you: https://www.epa.gov/greenpower
Home Agriculture		
	Make some changes in *how* and *what* you eat	Eat local, Eat a plant based diet, Reduce consumption of meat, Meal plan, Conserve water, Buy organic, Buy ecolabel products
	Make your own greenspace	Plant a tree/trees, Reduce lawn mowing, Grow a garden
	Reduce your waste	Reduce food waste and when you do waste, compost it
Transportation		
	Buy an electric vehicle	Buy an electric car and then install an electric vehicle-charging panel. Electric vehicles and smart chargers are promising technologies that can be coordinated with time-based rates (TBR) to receive price signals or demand response programs, which dispatch control signals to charging stations. The charging stations can respond to price or program signals by increasing or decreasing load in response to grid needs and can be paired with solar PV or storage systems for more optimal charging behaviors. Car fuel economy comparison - Compare cars side by side: https://www.fueleconomy.gov/feg/findacar.shtml When you buy, buy a more efficient vehicle – greater than current average 25.4 mpg.
	Car maintenance	Keep your car tires at the proper tire pressure, and follow proper maintenance schedule

	Change your mode of transportation	Walk, Ride a bike, Take the bus or rail, and Carpool
	Pay attention to *how* and *when* you drive	Drive less aggressive. This not only saves gas, but it also saves your sanity and reduces pollution. Drive less, and drive your car until it has reached its useful life.
	Fly less	A great resource by International Civil Aviation Organization (ICAO) allows you to estimate your carbon emissions here: https://www.icao.int/environmental-protection/CarbonOffset/Pages/default.aspx Google Flights recently began showing users what the carbon emissions would be for a trip. Direct flights not only save you time, with fewer hassles, but are better for the environment by reducing emissions.
Looking for money to use on projects? Use this DOE tool to find incentives that meet your needs based on IRA and IIJA Legislation. More incentives and policies are below. https://www.energy.gov/save?emci=f563caca-abe3-ed11-8e8b-00224832eb73&emdi=6e357a29-5ce4-ed11-8e8b-00224832eb73&ceid=8517694		
Commercial/Industrial Actions		
Don't forget, you can do any of the actions above for your business too		
Internal Systems and Controls		
	Battery Storage	Battery storage combined with distributed generation and demand response could provide greater grid stability and optimize behind the meter resources. If paired with a time-based rate, storage can also take advantage of energy arbitrage opportunities.
	Distributed generation	Install combined heat and power systems, solar photovoltaic panels, wind turbines, hydropower, biomass combustion or co-firing, or municipal solid waste incineration.

	Energy Management Control Systems	Building Automation Systems (BAS) or commercial Energy Management Control Systems (EMCS) are computerized control systems that regulate the energy consumption of a building by controlling the operation of end-uses, such as the heating, ventilation, and air conditioning (HVAC), lighting, and water heating systems. This creates numerous opportunities for more efficient operations, control during demand response events, and response to time-based rates.

	Lighting	Networked Lighting controls in commercial buildings can provide dramatic energy reductions, in particular during evening hours when the buildings become vacant and workers go home. Networked controls use sensors to maintain lighting only where there is occupancy and can also be used to control lighting during demand response events, using dimming and daylight harvesting strategies, and/or in response to time-based rates.
	Retro-Commissioning	Retro-commissioning programs begin with an audit of the entire facility to determine what equipment and envelope measures need to be addressed. Opportunities for retro-commissioning can offer incentives for energy efficiency measures (e.g. lighting retrofits, building automation upgrades, HVAC improvements, variable frequency drives), demand response technologies, and distributed generation (if applicable).
Transportation		
	Electrified Public Buses	Electrified public bus transportation is an opportunity to change the fuel source of public transportation and utilize the buses as energy resources on the grid. For example, charging mid-day when solar production is highest, through either demand response or time-based rates can create opportunities for greater efficient use of energy.

ENERGY STAR® is the government-backed symbol for energy efficiency, providing simple, credible, and unbiased information that consumers and businesses rely on to make well-informed decisions. Check out their webpage for great information on energy efficient products you can buy, such as washers and dryers, or to help in evaluating the energy savings from one of the projects above (https://www.energystar.gov/). Also, make sure to use this resource: (https://www.energystar.gov/rebate-finder?zip_code_filter=47401&page_number=0). Just enter your zip code to find rebates and other special offers available in your area.

Also, the Database of State Incentives for Renewables & Efficiency (DSIRE) serves as the nation's most comprehensive source of information on financial incentives and policies that promote renewables and energy efficiency at the federal, state, local and utility levels. Just enter your zip code to find out more: http://www.dsireusa.org/

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