

Introduction

The Village of Ardsley Community Environmental Advisory Committee (CEAC) offered the first introductory session on reducing household carbon footprints in Ardsley during December, 2020. The CEAC launched as a committee 18 months ago and focuses on two key initiatives: 1) helping the Village and Ardsley residents be stewards of our Village environment and lands and 2) addressing climate change through sustainable practices. The committee provides information to the community through communications, such as GREEN Growing and GREEN Living, and educational offerings like the recent webinar on Coyotes. The committee recently worked with the Village to acquire and approve the Community Choice Aggregation (CCA) option to supply green electricity in Ardsley. The committee also advises the Board of Trustees on environmental policy issues consistent with NY State guidelines for conservation advisory councils defined first in the 1970s.

9

ARDSLEY CAN BY 2030!

C
Carbon Reduction

- Everyday life
- Households
- Transportation

A
Act Sustainably

- Lifestyle choices
- Landscape practices
- Pollinator Pathways

N
Neighbor by Neighbor

- Community efforts
- Neighborhoods
- Collaboration

Communication, Education, Collaboration, Action

Village of Ardsley CEAC

The goal of **Ardsley CAN by 2030!** is to collectively reduce Ardsley household emissions by 50% over the next 10 years. To get there, we will provide information that offers easy, practical actions that anyone can take. Not everyone can dump their fossil fuel powered SUV and purchase an electrical vehicle. We recognize that. That's why we will ensure that we provide a range of actions that are pragmatic.

Small actions, when done by everyone, can add up to a tremendous amount of change that will slow and even reverse climate change.

As you might have surmised the CAN in **Ardsley CAN** is an acronym. The three letters serve as pillars of the program.

First, the letter C stands for Carbon Reduction.

Our focus for Carbon reduction starts with households in Ardsley. Specifically, we're looking at 3 key segments for change. These segments lie within our Everyday Lives, within our Households and in our Transportation.

The next letter stands for Acting Sustainably.

Sustainability means operating in a manner where we meet our own needs without compromising the ability of future generations to meet their needs. This extends not only to natural resources but to society. So, we will be promoting sustainable practices that will involve lifestyle choices and helping the environment in our own backyards.

Finally, the N stands for Neighbor by Neighbor

This pillar leverages Ardsley's generous community spirit by supporting these efforts neighbor by neighbor. This will involve volunteer activities within Ardsley. These activities provide opportunities to make a difference on a larger scale. Neighbor by neighbor also represents that each of us is an integral part of this change and that change will happen neighbor by neighbor.

And how do we plan to get there? Through community, communication, education, collaboration and action.

11

SOME BASICS

1. What is a Carbon Footprint?
2. How is a Carbon Footprint Measured?
3. What is the New York State CLCPA?
How does it affect Ardsley?

New York's Nation Leading Climate Targets

- 40% Reduction in GHG Emissions by 2030
- 85% Reduction in GHG Emissions by 2050
- 70% Renewable Energy by 2030
- 100% Zero-emission Electricity by 2040

Village of Ardsley CEAC

1. What is a Carbon Footprint?

Carbon footprint is defined as the total amount of greenhouse gases, including carbon dioxide and methane, that are generated by our actions. Carbon dioxide is caused by burning fossil fuels, like coal, and from driving gasoline powered automobiles. Methane is a powerful greenhouse gas. It is created by our increased reliance on natural gas and the inevitable leaks in the distribution system. Thus, switching to gas (even from coal) is not beneficial since leakage negates the clean-burning benefits. Methane is also caused by cattle. We eat more steaks and hamburgers which leads to an increase in livestock population which then leads to more methane being released into the atmosphere. Livestock accounts for 44% of all agricultural greenhouse gas emissions. While methane only composes around 15% of all greenhouse gases methane is 84% more potent than carbon dioxide. A study put out in 2018 estimated that the oil and gas industry is leaking 13 million tons of methane a year. Multiply that by its potency and that's a lot of damage to the environment.

2. How is a Carbon Footprint Measured?

Carbon footprint is measured in metric tons. The average carbon footprint for a person in the United States is about 20 metric tons, which is one of the highest rates in the world. Globally, the current average is closer to four metric tons. To have the best chance of avoiding a 2°C rise in global temperatures from pre-industrial levels, the average global carbon footprint per year per person needs to drop under two metric tons by 2050. The challenge? We need to go from 20 to 2 metric tons in 30 years.

Lowering our individual carbon footprints in the US from 20 to 2 tons doesn't happen overnight. By making small changes to our actions, like reducing waste, walking more, taking fewer connecting flights and being mindful of purchasing decisions we can start to make a big difference.

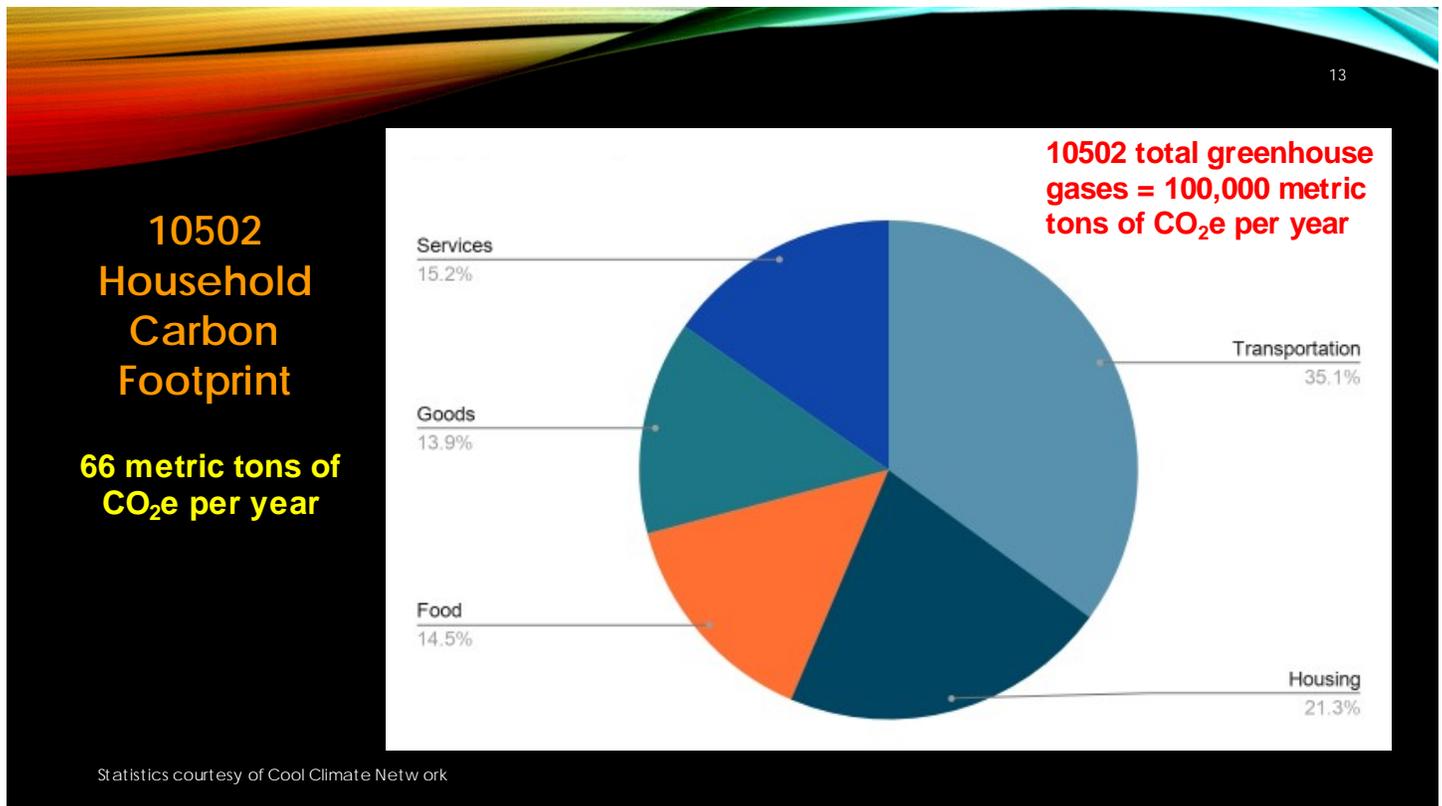
3. What is the New York State CLCPA and how does it affect Ardsley?

Last year NY State passed the CLCPA, which stands for Climate Leadership and Community Protection Act. The CLCPA activated a wide range of efforts to implement changes that will impact our Village in the coming year and decade. It mandates an ambitious path to decarbonization which encourages participation sooner rather than later.

The CLCPA mandates that all electricity will be 100% clean by 2035. Our challenge is to electrify all our energy needs. This is called "beneficial electrification" because not only is it cleaner, but it is also typically much more efficient. For example, a heat pump is four times as efficient as a traditional furnace. An electric vehicle, or EV, is up to five times as efficient as an internal combustion engine.

There are many climate targets set by this law. The four key targets are to 1) reduce greenhouse gas emissions by 40% by the year 2030; 2) decrease greenhouse gas emissions by 85% by the year 2050; 3) get 70% of our electricity from renewable sources by 2030; 4) to get to 100% emissions free electricity supply by 2040.

So how does this affect Ardsley? The law stipulates that three years from now the NY Department of Environmental Conservation is to put forth regulations that ensure compliance with the targets and that these regulations be legally enforceable. The law affects commercial and residential property as well as transportation. The sooner we start the easier it will be for all of us to meet forthcoming regulations.



So, how are we doing in Ardsley as a village?

In the 1.3 square mile of Ardsley we have about 1,500 households. Ardsley 10502 emits approximately 100,000 metric tons of greenhouse gases per year. Dividing that total by the number of households gives us about 66 metric tons per household per year.

The average emission per household includes some Village overhead for goods and services shared by residents. Our shared, achievable opportunity is to reduce Ardsley's total annual emissions by 50% by 2030 to 50,000 metric tons per year and reduce our household carbon footprint to an average of 33 metric tons a year.

It should be stated that there is about 4,300 metric tons coming from categories other than households. They include assisted living facilities, businesses, schools, and the additional Village overhead not captured in the household carbon footprint of 66 metric tons. We include the challenge to reduce that amount to about 2,100 metric tons per year as part of this initiative.

Now let's look at the average carbon footprint for each household in 10502.

Since Ardsley is a small community, Village overhead is a minor piece of our footprint and, therefore, the main opportunity for change is in Ardsley households. That is where we are placing most of our focus because it will yield the most dramatic results.

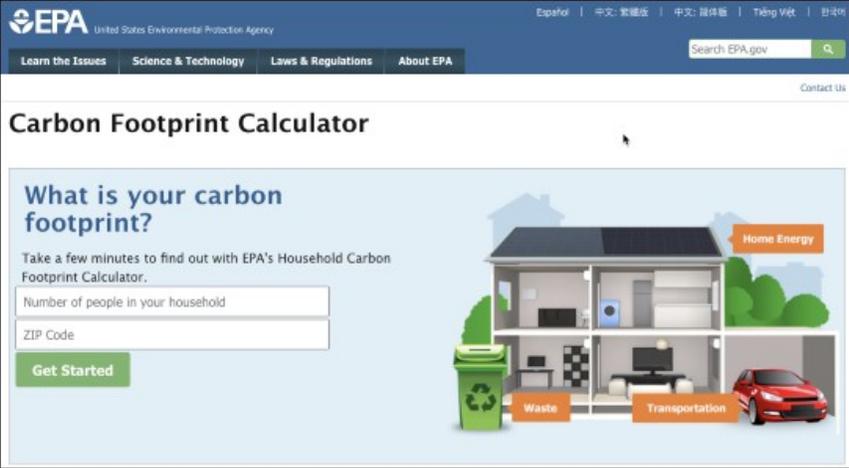
The highest Carbon lever is transportation, then followed by housing, services, food, and goods. Housing includes the heating and cooling of your home, as well as electricity usage. Food includes the amount of waste, proportion of plant-based food in our diet and use of organic and locally sourced food. Goods cover a lot of our lifestyle needs and choices.

Some examples of how to reduce the carbon footprint in the goods area would be to:

- Purchase local goods and services
- Divest from fossil fuel funds in your financial portfolios; invest in funds with high ESG scores. ESG stand for Environmental, Social and Governance and is a way to measure the sustainability of a company or country.
- Buy items with less packaging
- Shop thoughtfully to reduce waste
- Buy energy efficient appliances
- Choose brands (of clothes, shoes, etc.) that are more sustainable than others. Many brands have embraced eco-friendly, sustainable and ethical practices, such as fair wages, carbon reduction, less waste, recycling and ethically sourced material.

A way to reduce one's carbon footprint in the services area is to support business that are committed to reducing their carbon emissions and waste while delivering a service. Landscaping services, where gas powered blowers and mowing equipment is used, falls under services.

Our sessions will focus on all these categories, giving you ways to reduce your carbon footprint in each category.



14

Calculate and monitor your own Household Carbon Footprint

EPA Carbon Footprint Calculator: <https://epa.gov/carbon-footprint-calculator/>

There are many good carbon footprint calculators out there. Most calculators that you will find out there derive their data from the CoolClimate Network. The CoolClimate Network is a program out of UC Berkeley. We like the calculator from the EPA which uses data from the CoolClimate Network. Once you settle on a calculator you like, stick with it so you can track the impact of the changes you are making. The calculator is not perfect. For example, it does not ask about any electric vehicles (EVs) or hybrid vehicles you may have. In the case of an EV say you don't have a car.

The first step is to get a baseline. Once you get your baseline, make a few changes to your lifestyle choices and see how much it reduces your carbon footprint.

We recommend revisiting and recalculating your carbon footprint at least twice a year.

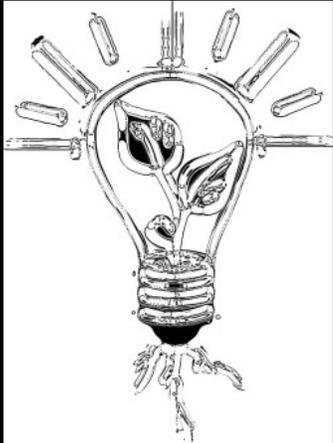
<https://www3.epa.gov/carbon-footprint-calculator/>

16

12 EASY CHANGES YOU CAN MAKE TODAY

(THAT ALSO SAVE MONEY (\$); IMPROVE HEALTH (H) & SAFETY (S))

1. Unplug your charged devices \$
2. Drive less \$ H
3. Wash clothes in the cold cycle & Air dry your laundry \$
4. Replace regular light bulbs with LED lights \$
5. Reduce beef in your diet \$ H
6. Replace appliances with energy efficient models \$
7. Reuse items whenever you can \$
8. Plant a tree H
9. Shorten your shower by at least a minute \$
10. Ditch bottled water and drink renowned NY tap water \$ S
11. Properly inflate your tires and get regular tune-ups \$ S
12. Request a biofuel mix in place of heating oil \$



Village of Ardsley CEAC

We promised that shaving a few carbon tons doesn't have to be too hard or impactful to your lifestyle. Here are 12 easy changes you can make now to start your own easy carbon diet. You'll be amazed at how much carbon you can save with each of them.

1. Unplug Your Devices

This might surprise you but all electronics use energy when they're plugged in, even if they're turned off. In the US, "vampire power," devices and appliances that continuously use up electricity are responsible for approximately \$19 billion in energy every year,¹ which is about \$165 per U.S. household on average. A simple solution is to leave your electronics unplugged at all times, unless you're actually using them. And if you can't unplug, put them into sleep mode when you walk away for a break.

2. Drive less

When possible, walk or ride your bike to avoid carbon emissions. Ardsley is a great walking village; we are only 1.3 square miles and we have a downtown that is within walking access by all residents. Try to be more efficient when driving – bunch your errands. We learned during the pandemic that we don't need to run out to the store

every day. Use those good lessons learned to reduce the amount of shopping trips you'll take. This also saves time, aggravation and wear and tear on your car. And exercise is good for you.

3. Wash clothes in the cold cycle and air dry your laundry

Did you know you don't need to wash in hot and warm water all the time, even in this time of Covid? Cold water is as effective with today's detergents. By selecting cold water to wash your clothes you are offsetting five times more in greenhouse gas. This simple change can reduce your washer's carbon emissions by 75% and save you \$60 for every 300 loads of laundry you clean. And for lightly soiled clothing, cold water sanitizes just as well as a warm wash. Additionally, as an added benefit, it will help you preserve the quality of your clothes.

When it is sunny and daytime temperatures that are above freezing consider air drying your laundry. If you have enough room in your home, you can even set up a little dryer stand & air dry indoors. This amazing old-school method allows you to bypass your drying machine and drastically reduce your carbon footprint while reducing your gas and electricity usage and cost. This is an area which should save you money.

4. Replace Your Lightbulbs

If you want to help change the world while reducing your carbon footprint and saving money, start with changing your light bulbs. It's one of the best things you can do for the environment — and your budget. Replace regular light bulbs with LED bulbs or compact fluorescent light (CFL). Energy efficient light bulbs use at least two-thirds less energy than standard incandescent bulbs to provide the same amount of light, and they last up to 10 times longer.

5. Reduce Beef consumption

Commercial beef farming has a major impact on global warming. Emissions of the greenhouse gas methane from livestock are larger than you might think, posing an additional challenge in the fight to limit global warming. Eating less beef products is one of the most effective ways to reduce your personal carbon footprint and to generally reduce your negative impact on the environment. Plus, it is good for your wallet, heart and health!

6. Buy Energy Efficient Appliances

Household appliances can use a surprising amount of energy, but buying new appliances is a relatively rare event for most. When buying appliances, look for ones that are A-rated with Energy Saving Recommended labels — these consume much less energy and minimize your carbon dioxide emissions for the lifetime of the appliance. Buying the most energy efficient appliance makes environmental sense because it means that you will be minimizing your carbon dioxide emissions and saving money at the same time.

7. Reuse items whenever you can.

Every piece of waste you toss in the garbage adds to your carbon footprint. You may not be able to bring your trash production down to nothing, but you can reduce it by investing in non-disposable goods that can withstand a bit of wear and tear. Reusable shopping bags, food storage containers, coffee cups and straws easily replace many of the items that are often thrown away every day.

8. Plant a tree.

One of the easiest ways to take care of the planet is also the most fun. Set aside an afternoon to plant a tree, preferably a native one, in your yard and the benefits will last its whole life. A young tree absorbs roughly 13 pounds of CO₂ per year and a mature tree can absorb 48 pounds. After 40 years, a tree will have sequestered [1 ton](#) of carbon that would have otherwise contributed to global warming.

9. Take slightly shorter showers.

You don't need to deprive yourself of the pleasure of a hot shower to adopt a eco-friendly lifestyle. According to Mother Jones, we would save 20.9 billion pounds of CO₂ a year if we all shaved just one minute off our shower sessions. If that change sounds easy for you, try taking the five-minute shower challenge for a week or two.

10. Ditch Bottled Water

Here is an easy one to do - and there are tons of health benefits as well since plastic can leach into the water. Did you know:

- PET bottles – the most common container for bottled water – are made from fossil fuels.
- Of the 15% of PET bottles that are recycled in the United States, nearly 40% of those are exported to other countries for recycling. This means transportation-related carbon emissions go into the process of recycling these bottles.
- An average household drinking bottled water, which is 800 bottles per year, creates 350lbs. of CO₂, which is like driving 368 miles with a car.

Get a reusable water bottle and save a ton of carbon and money in the process!

11. Properly inflate your tires and get regular tune-ups.

When your car's tires are low on pressure, it must work harder to move from point A to point B, wasting gas and increasing emissions in the process. Inflating your tires can save around 400 to 700 pounds of CO₂ per year.

Maintain your car to ensure that you're not wasting oil or expelling unnecessary fumes. Keeping it tuned up and running efficiently will reduce your carbon footprint. On top of that, make sure to routinely replace your oil, air, and fuel filters.

12. Request a biofuel mix

Biofuel is a fuel made by mixing ultra-low sulfur heating oil with biodiesel – a renewable energy resource made in America from fatty acids found in soy, corn and other vegetable oils, animal fats, recycled restaurant oils and other natural sources. Since Bioheat is a blend of fuels, it is named by the percentage of biodiesel it contains – for example, B5 is five percent Biodiesel. Typical blends range from two to twenty percent biodiesel per gallon. Biofuel is usually cheaper than regular No. 2 heating oil. At times it may be slightly more expensive, but it still saves you money in the long run because it burns cleaner than regular heating oil – which means your heating system will last longer and require fewer repairs. You do not have to have an empty tank to get bioheating oil. As bioheating oil is a blend of vegetable and conventional petroleum-based heating oil, it will mix with the oil already in your tank and you can start using it today. If you heat your home with oil, ask your supplier about biofuel options for your furnace and start saving money and helping the environment today.

LIVED EXPERIENCES TO SHARE

What have you done that you can share with us?

What other ideas have worked for you that you can share?

What changes do you want to make?



Village of Ardsley CEAC

Tips from neighbors:

- When bunching errands, drive to the errand furthest away first and then work your way back. This saves the most fuel and creates less greenhouse gasses.
- Go old school with tips from past generations:
 - Use a clothesline to dry clothes in the fresh air – they smell better and last longer
 - Windows can be very inefficient and cause drafts in the winter. Consider insulated blinds and/or drapes that can be closed during nighttime and hot days.
 - For drafty/leaky window and doors use draft stoppers.
 - Use fans rather than air conditioning
- Don't idle your car.
- Stop using lawn services that use gas blowers and mowers.
- Mulch mow your leaves and grass clippings.
- Go vegetarian
- Create and use a compost pile for green and brown waste
- Participate in the Greenburgh food scrap recycling program:
<https://greenburghnaturecenter.org/food-scrap-recycling/>
- Be creative and efficient with leftovers.
- Regulate temperature during the summer by shutting down windows in the morning and keeping the sun out using blinds or drapes too keep the house cool. Open windows at night to refresh with cooler air.
- Plant a native garden.

- Stop your dryer halfway through the cycle and let the clothes air dry. This has a big impact on cost and carbon emissions and your clothes will last longer.
- Use a setback programmable thermostat

Next **Ardsley CAN by 2030!** Zoominar: Reducing Your Home's Carbon Footprint

Two dates offered: February 11 and February 24, 7 pm – 8 pm