

#### **HOW GREEN, Larchmont**

#### SUSTAINABLE SUNDAY OCTOBER 26 @ 3 PM

Larchmont Avenue Church. 60 Forest Park Ave.
Carhart Room (lower level)

#### "REDUCING USE: Action = Impact"

Individual & local climate action, continue to make a difference!

#### Measure. Track & Reduce Use

CURE 100's Carbon Tracker provides insight, benchmarks and guidance on usage and reducing your carbon footprint.

Presenter: Dr. Chandu Visweswariah Vice-President. CURE100



#### **Energy Efficiency**

7

Sustainable Westchester provides perspective on local action to combat changing federal priorities and energy programs for individuals (Energy Smart Homes, GridRewards & Solarize Westchester) to reduce usage, costs & increase clean, renewable, efficient energy sources.

**Presenter: Noam Bramson,**Executive Director, Sustainable Westchester

#### Healthier You, Healthier Planet

Understanding human health risks from exposure & how reducing use can play a role in curtailing risks to our health and the environment.

**Presenter: Kristen Carpenter,**Senior Environmental Scientist, CDM Smith



All are Welcome. Spread the Word! Admission is Free. Learn more at lacny.org/earth-care OR call 914.834.1800

### Agenda

■ 3:00 – 3:15 p.m.:

60-second challenge: assess your household carbon impact Speaker: Chandu Visweswariah



**3:15 − 3:30 p.m.**:

Energy efficiency and energy programs for individuals
Speaker: Noam Bramson



■ 3:30 – 3:45 p.m.:

Health risks and health benefits Speaker: Kristen Carpenter



■ 3:45 – 4:00 p.m.:

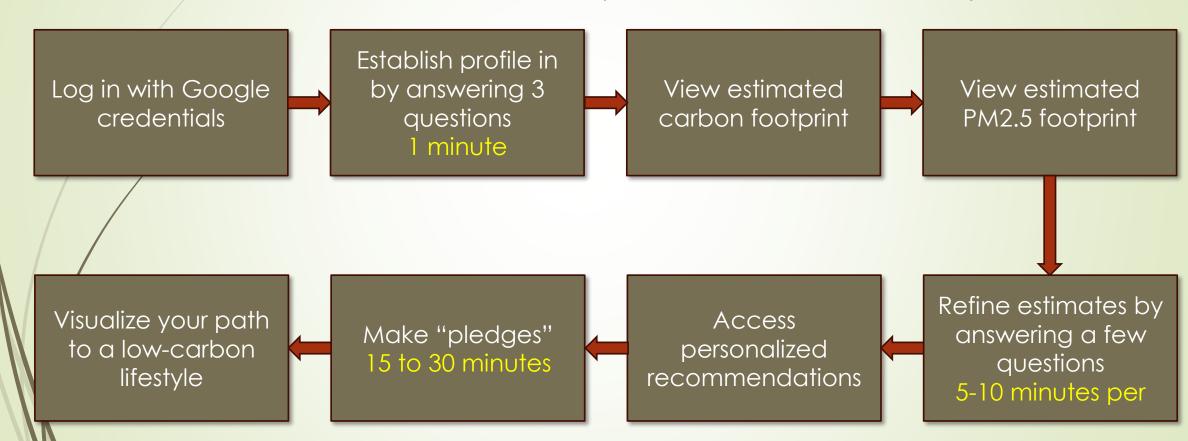
Q&A

## **CURE100 Carbon Tracker: Background**

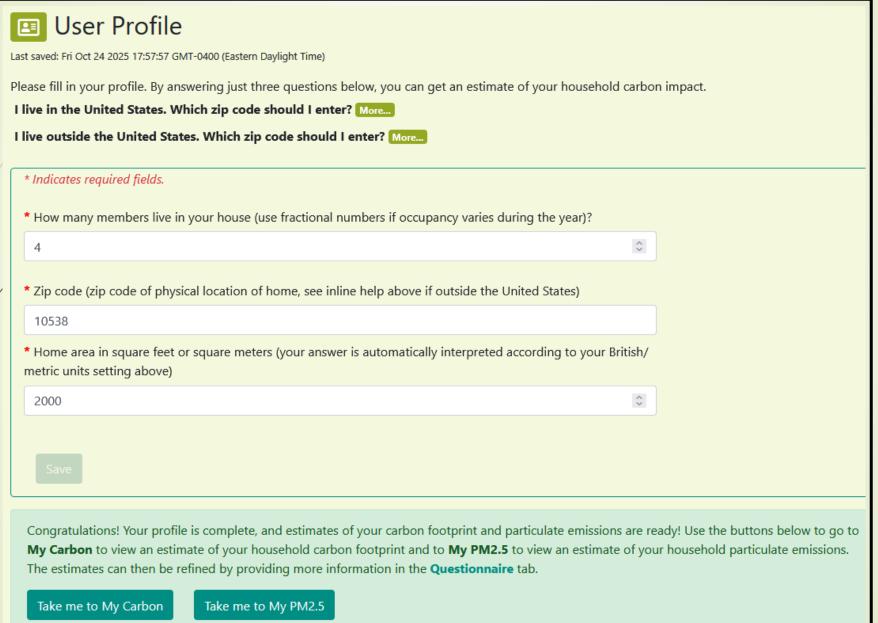
- The climate crisis is the <u>existential challenge</u> of our lives
- It is caused by an excess of greenhouse gases (GHGs) due to burning of fossil fuels
- Climate change has already done immense damage, but that pales in comparison to the "cascade" of tipping points we face in the future
- If we had diabetes... and could not measure blood sugar OR
  - If we had a budget crunch... but could not account for money WE HAVE NO CHANCE TO SOLVE THE PROBLEM!
- Therefore, we all need to be <u>carbon literate</u>
- This starts by understanding your own household's carbon footprint...... and particulate emissions footprint
- And then making a plan to <u>get fossil fuel poisons out of our lives urgently and with high</u> priority

#### 60-second challenge: CURE100's Carbon Tracker

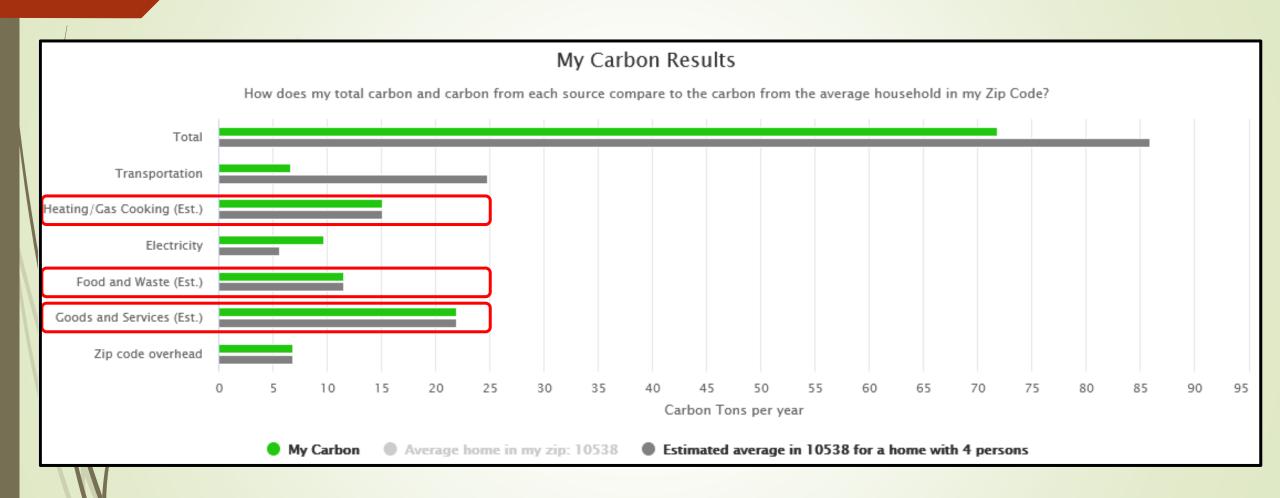
- Free software that is intuitive and easy-to-use
- Runs in any browser on any platform (PC, laptop, tablet, smartphone)



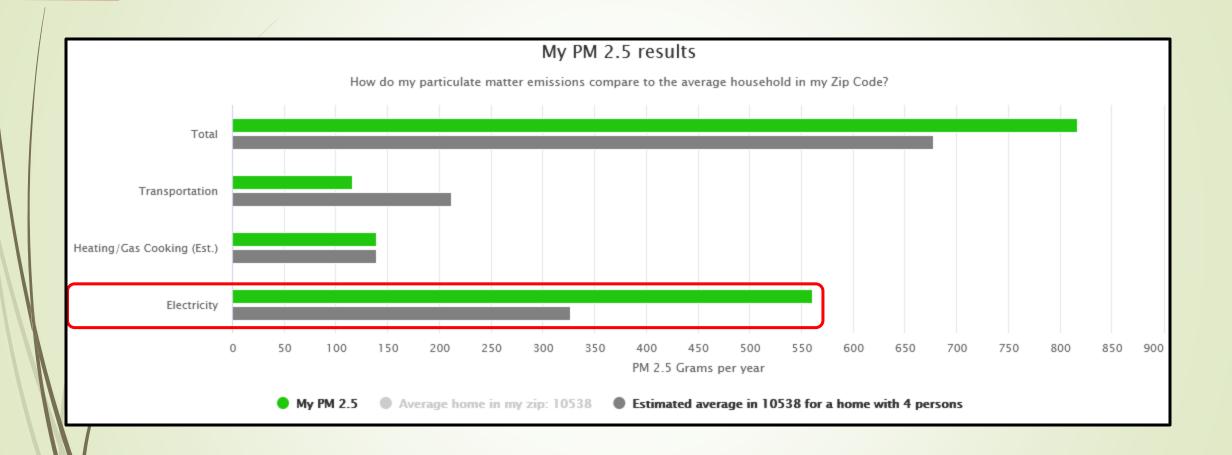
# Establish a profile



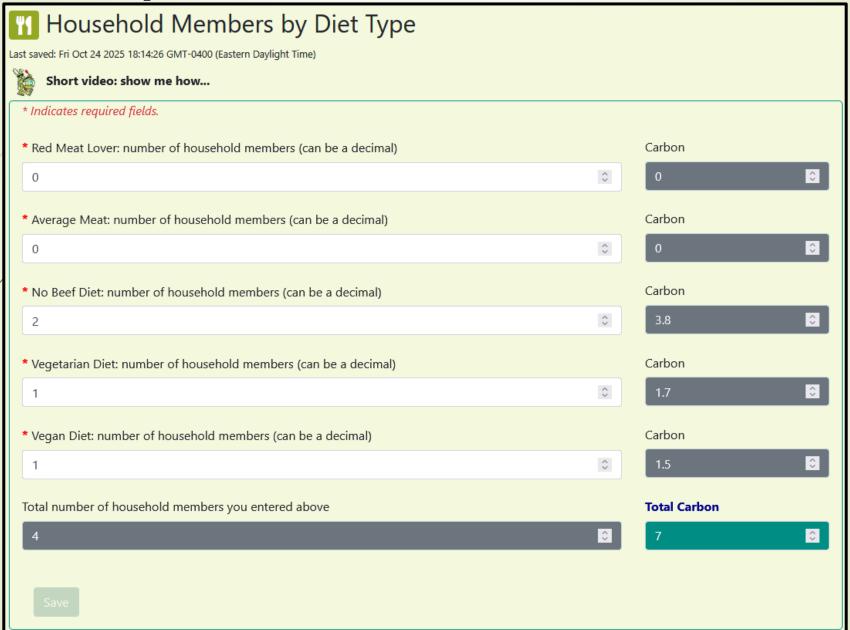
# View your household carbon footprint



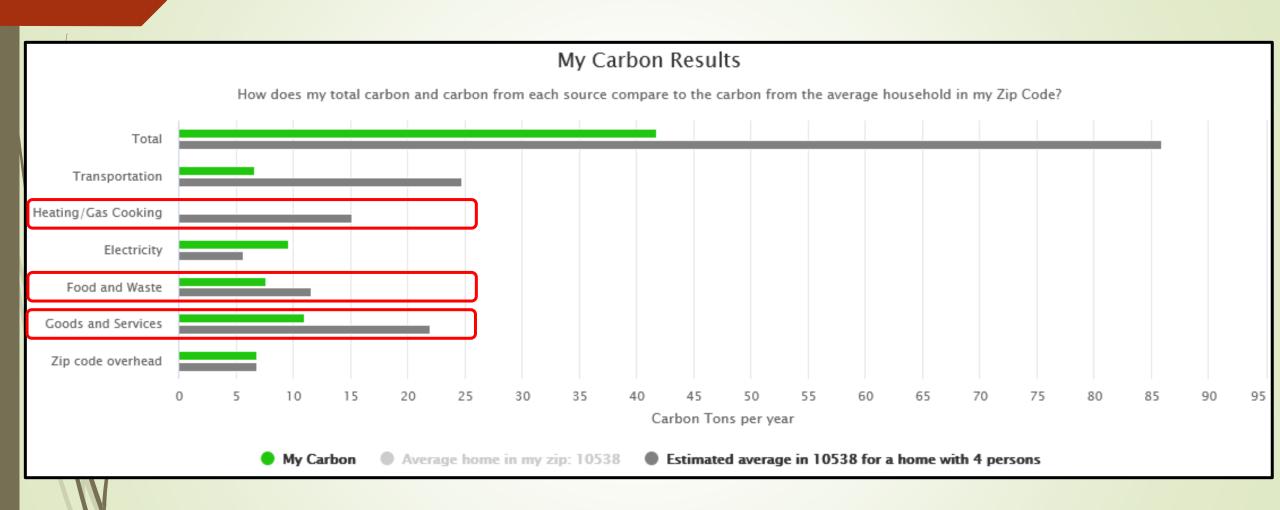
# View your household PM2.5 footprint



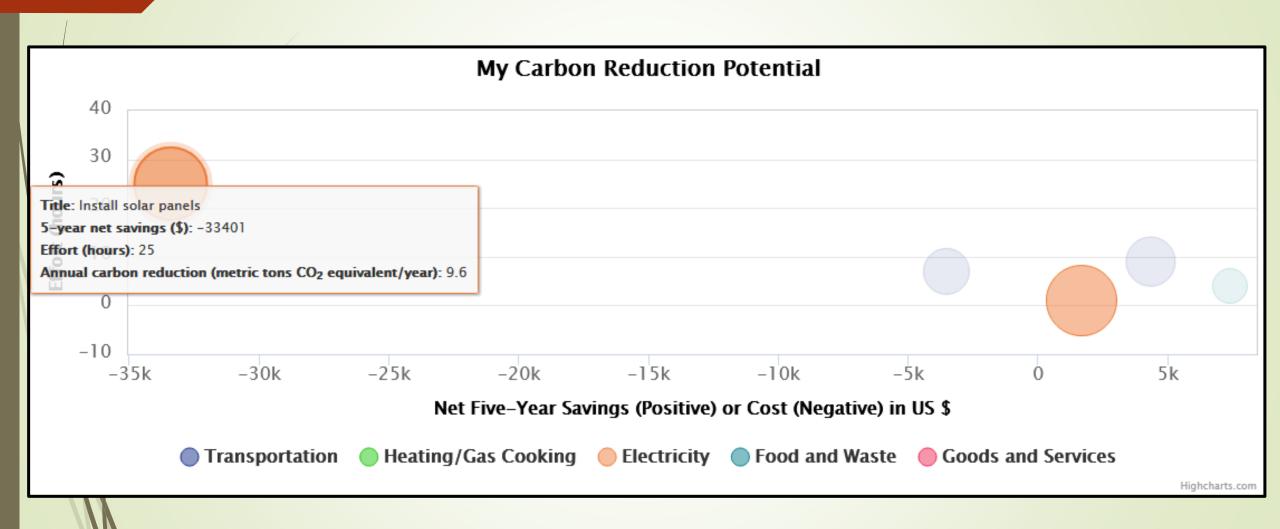
# Refine your estimates



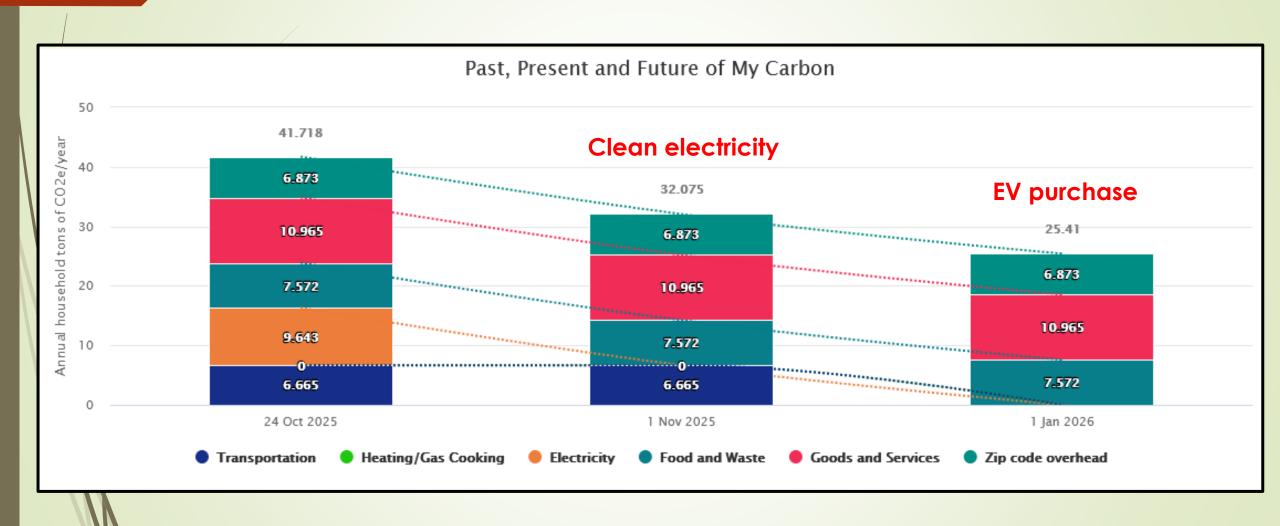
#### View the results



# Access personalized recommendations



### Make pledges and visualize the future



#### Call to action

- 1. Go to cure 100.org/carbon-tracker and assess your carbon footprint
- 2. Get fossil fuels out of your life, make concrete pledges to take these top 4 actions:
  - Drive electric vehicles and/or use public transportation
  - Heat your home with heat pumps
  - Use 100% clean electricity
  - Migrate to an induction stovetop
- 3. Create and lead a Larchmont chapter of CURE100



# Four quick tips regarding dining

"No utensils and no condiments, please!"

Keep a knapsack in your car with containers for leftovers

"No straw please!"





Always keep a "spork" in your car







October 26, 2025

# AN URGENT CHALLENGE

# **Global Impacts**



# **Local Impacts**



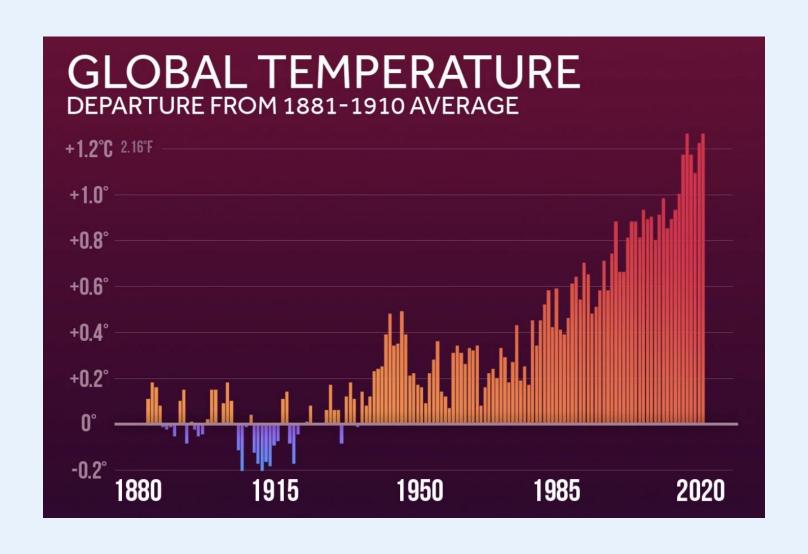
# Intensifying Inequalities

- Urban Heat Islands
- Poor Air Quality
- Inadequate Housing
- Vulnerability to Flooding
- Financial Burdens





# It's A Crisis...



# ... And An Opportunity

#### STRATEGIES TO BUILD HEALTHY, EQUITABLE, CLIMATE-RESILIENT COMMUNITIES





## **Sustainable Westchester**

A Model of Regional Collaboration, Created By and For the Municipalities of Westchester County

#### 45 Members

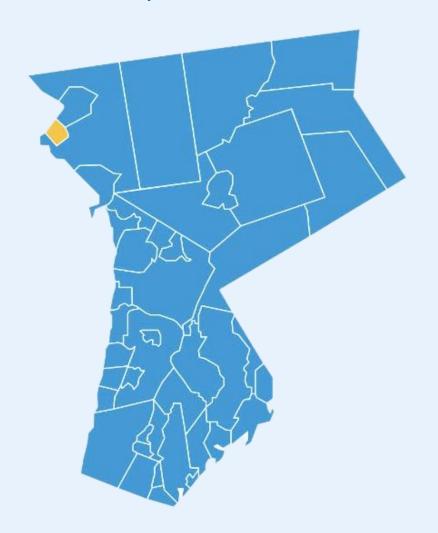
Cities, Towns & Villages
The County Government

#### Leadership

Volunteer Board
Public Officials, Advocates, Subject-Matter Experts

#### Staff

A Team of 20 Across 4 Departments
Decades of Experience



# Impact, Partnerships, and Innovation

#### Impactful Programming

A track record of delivering solutions through a range of effective programs touching more than 150,000 households.

- Solar & Battery Storage
- Building Decarbonization
- Green Workforce Development
- Westchester Power CCA

#### Wide-Ranging Partnerships

- Municipal and County Leaders
- NYSERDA and Clean Energy Hubs
- US Department of Energy
- Businesses, Not-for-Profits, and Foundations
- Volunteer Advocates

#### Culture of Innovation

Firsts in New York State:

- Residential Demand-Response
- Community Choice Aggregation
- Sunshine-to-EV Fast Chargers
- Community Solar in Westchester



# SIMPLE, EFFECTIVE ACTION

# GRIDREWARDS



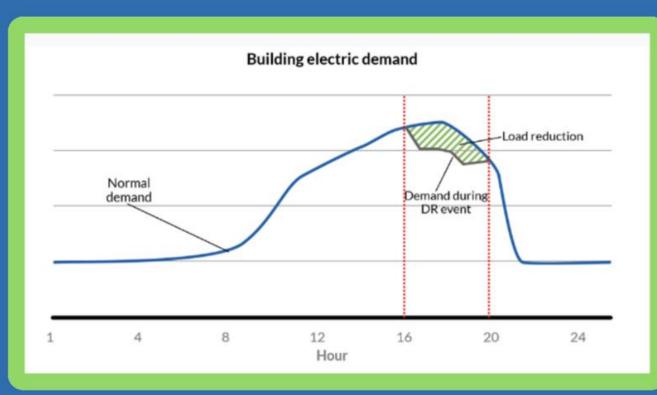


Unplug. Get 7 paid.



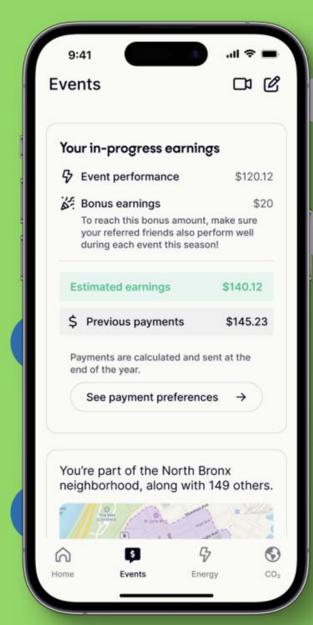
# DEMAND RESPONSE OVERVIEW





- Heat waves impose stress on the grid, as energy use spikes.
- Demand response programs ask consumers to voluntarily reduce energy use during peak hours.
- The aggregated impact functions like a virtual power plant.







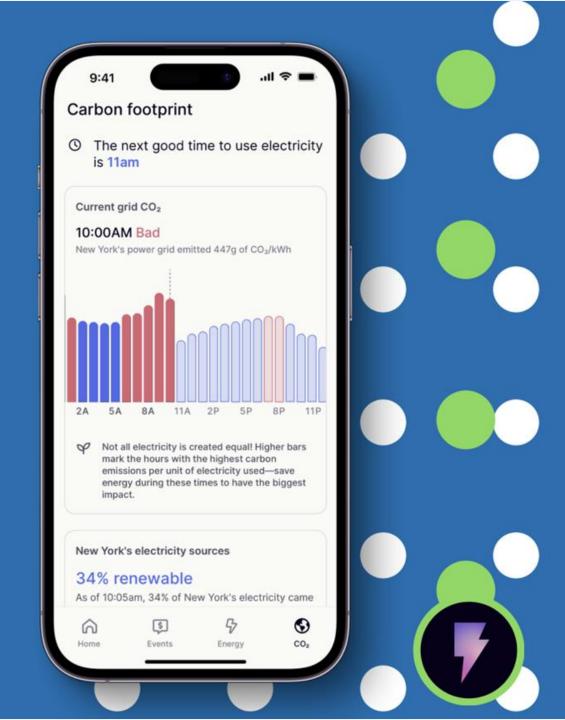


- Average user earns more than \$70
   per year with GridRewards!
- Participation is voluntary, earnings based on participation.
- No risk, no cost, no downside.
- Gain personalized energy insights and efficiency tips.

# EVERYONE BENEFITS

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- Reduced reliance on peaker plants means less air pollution, better public health.
- Less stress on the grid means more resilience, fewer power outages.



# SIGNUP IS EASY!

- Available to all Con Ed customers regardless of home type.
- Download the app to get started.
   You'll need your utility account number.
- You'll receive notifications before GridRewards events, plus tips for saving energy.

# GridRewards





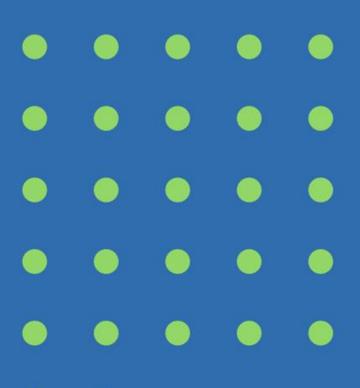




GridRewards is for ConEd customers only



# ENERGYSMART HOMES





# BENEFITS OF AN ENERGYSMART HOME



- **Comfort:** Warm in the winter, cool in the summer throughout the house.
- Health: Better ventilation means lower risk of mold, moisture, and respiratory ailments.
- **Savings**: Efficient systems reduce utility bills and cut maintenance costs.
- Climate: Electrification means less reliance on fossil fuels.
   Heating and cooling is 57% of home energy use.

# TECHNOLOGIES & SOLUTIONS











- Insulation and weatherization can cut energy use dramatically and reduce drafts.
- Air source heat pumps are 2-3 times more efficient than most fossil-fuel systems.
- Ground source heat pumps (geothermal)
   are 3-4 times more efficient that most fossil fuel systems and have the lowest
   operational costs.
- Heat pump hot water heaters are another important option.

# HOW WE HELP



- Free Support: We provide personalized, one-on-one guidance at no cost to you via the NYSERDA Regional Clean Energy Hub.
- **Technical Knowledge**: We know the systems and technologies and can identify the options that work best for your home.
- **Financial Incentives**: We can identify federal, state, and utility incentives and help you stack them for maximum benefit.
- Contractor Partner List: Connect with vetted contractors.

Available to
New York State
homeowners
and renters

# LET'S GET STARTED



- Contact us at EnergySmartHomes@SustainableWestchester.org or visit sustainablewestchester.org/energysmarthomes.
- A free home energy assessment is usually the first step.
- Incentives and rebates are significant, despite changes in federal policy.



# SOLARIZE







# SOLAR MAKES SENSE, AND WE MAKEIT EASY

- Solar is growing. Westchester homeowners installed 2,000 solar systems in 2024 alone, but tens of thousands more could benefit.
- Solar systems can dramatically **reduce electricity costs**, while cutting your carbon footprint.
- We can help you get started with a free, unbiased evaluation, initial modeling, and connections to trusted contractors.







Fill out a short **intake form** on our website.







We'll give you a free **preliminary assessment** and schedule a call to review your options.



We'll connect you to one of our **Certified Installer Partners**. And we'll keep following up to make sure you are satisfied.

## OUR INSTALLERS ARE

# VETTED & TRUSTED





- Background information on firm history & solar industry credentials.
- Photo documentation showcasing quality of work.
- **Experience** in serving residential solar (at least 20 projects per year.)
- Broad familiarity with Westchester jurisdictions (at least 20 jurisdictions.)
- Customer experience (review of proposals, contracts, owner's manuals.)
- Competitive pricing (\$/Watt) below the average for the region.

## HOW TO GET STARTED

Available to Westchester homeowners

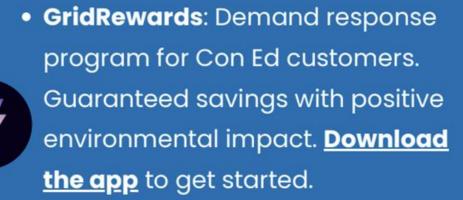
- Visit <u>sustainablewestchester.org/residentialsolarize</u>.
- Click "Free Consultation" button to reach the form.
- Enter basic information (name, address, contact info, etc.).
- Wait for your free assessment and schedule an appointment with our team to review.





## **SUMMARY**

#### **How to Take Action Now**



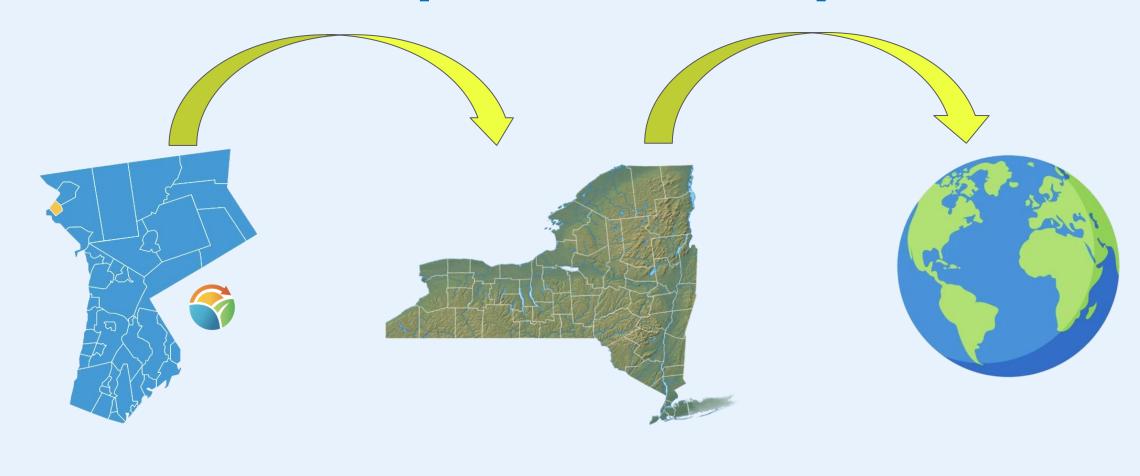
EnergySmart Homes: Free consultation on clean heating and cooling solutions for a healthier, more efficient home.
 Visit <u>bit.ly/SW-ESH</u> to get started.



 Community Solar: Subscribe to a solar farm in your region with guaranteed utility savings.
 NYSEG opportunities now. Visit sustainablewestchester.org/communitysolar to get started.



## Local Leadership for Global Impact



**MODEL COUNTY** 

10th LARGEST GLOBAL GDP

**INSPIRATION & IMPACT** 

## **Thank You & Questions**





## Healthier You, Healthier Planet

Kristen Carpenter October 26, 2025

### Healthier You, Healthier Planet

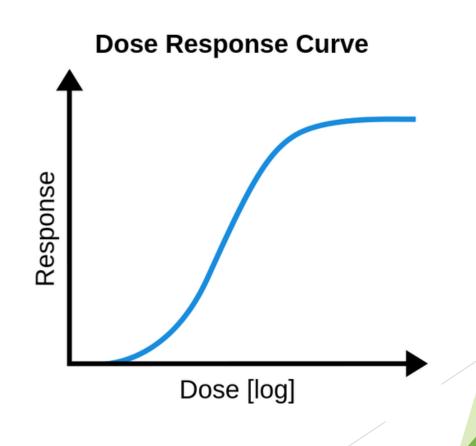
- Basics of Risk Assessment
- ► Fossil Fuel-Related Health Impacts
- Other Pervasive Materials/Chemicals
  - ► Microplastics
  - ► Forever Chemicals PFAS
- Reducing Use is One of Our Best Options

## Basics of Risk Assessment

Exposure x Toxicity = Risk

## **Toxicity**

- Toxicity values are conservative but uncertain
  - Animal studies
  - Sensitive individuals
  - Study duration
  - Study size
  - Health endpoint studied
- Some chemicals do not have thresholds
- Not all chemicals in use have been studied



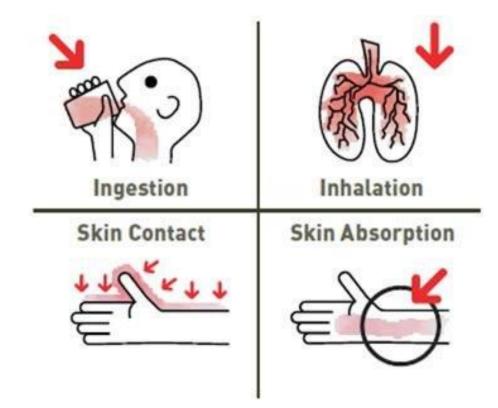
## Policy Approaches to Address Uncertainty in Toxicity

- ► EU: Precautionary Principle
- US: more reactive, proof-based system allowing chemicals to remain legal unless proven harmful
- Examples:
  - Artificial food dyes Red 40, Yellow
     5, Yellow 6 (potential hyperactivity in children)
  - Potassium bromate, a dough strengthener (kidney and thyroid cancer in rodent studies)



## Exposure

- Exposure routes
- Factors that influence dose
- Exposure frequency and duration make a difference



## Fossil Fuel-Related Health Impacts

- ► It's Not Just About CO<sub>2</sub> particulate matter and other chemical emissions are generated by burning fossil fuels
- Health Impacts
  - ► Respiratory illnesses: asthma & COPD
  - ► Cardiovascular diseases: heart attacks, strokes
  - Increase in cancers
- ► Trends: particulate pollution from fossil fuels is decreasing
- ► Technology to capture pollutants can only help so much



## Microplastics - What are they?

- Microplastics less than 5 millimeters in size
- Nanoplastics less than 1 micrometer in size

#### The Size of Micro- and Nanoplastics

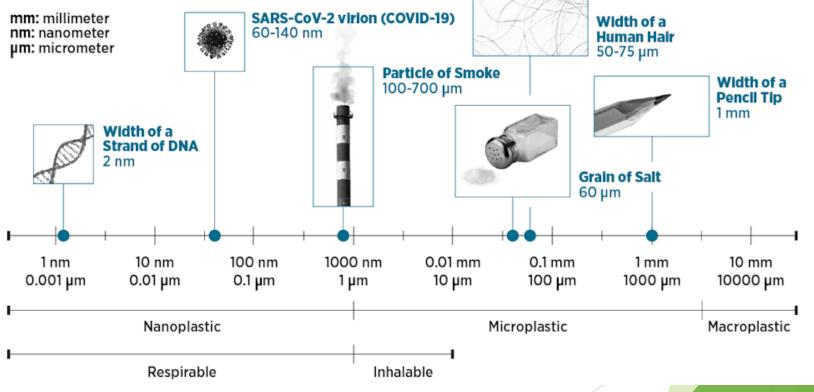


Image source: www.changetheplastic.com



## Where do microplastics come from?

- Primary sources
  - Microbeads in toothpaste and face wash
  - Resin pellets in plastic manufacturing
  - Glitter and industrial abrasives
- Secondary sources
  - Synthetic fabrics like polyester, nylon, and acrylic
  - Degradation of plastic bags, bottle, and food containers
  - Wearing down of tires, paint, other surface coatings
  - Food chain and drinking water

## Health Effects of Micro- and Nanoplastic

- We know that exposure is happening because of observed levels in tissue
- Toxicity data is still limited

#### Potential effects on human health?

#### **Current Studies**

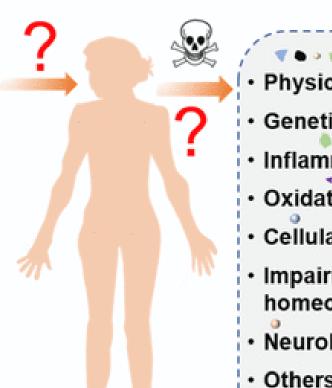
- In vivo
- Mammal model
- Mice/mouse/rats
- Others?

#### In vitro

- Human cells
- Organotypic models
- Others?

#### Epidemiology

- Occupational
- Plastic workers
- General person?



- Physical damage?
- Genetic toxicity?
- Inflammation?
- Oxidative stress?
- · Cellular damage?
- Impairment of metabolic homeostasis?
- Neurological effects?
- Others?

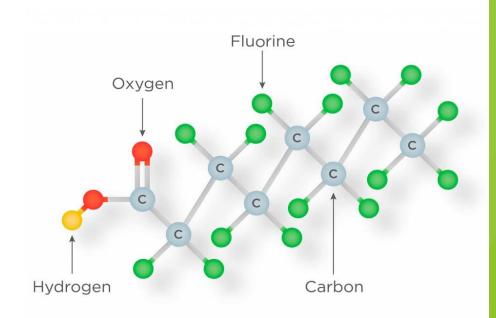
Image source: Li and Liu. 2024. Env. Sci. & Tech. Vol. 58. Issue 7.

Microplastics
- How to
reduce
exposure?

Limit	Limit personal exposures: filter water, vacuum often, limit processed foods, avoid plastic tea bags
Choose	Choose alternative containers: glass, stainless steel, and ceramic
Choose	Choose natural fiber fabrics: cotton, linen, wool, silk
Avoid	Avoid single use plastics
Reduce	Reduce use to help break the cycle

## Forever Chemicals - What are they?

- ► PFAS Per- and polyfluoroalkyl substances
- Large, complex group of synthetic chemicals includes nearly 15,000 chemicals
- Widely used in consumer products since the 1940s
- Persistent very slow to break down in the environment
- Bioaccumulate people may take in more PFAS than they excrete



#### Where do PFAS come from?



### Primary sources:

Firefighting foams (AFFFs)

Non-stick cookware (Teflon and Teflon alternatives)

Stain-resistant fabrics and water-repellent fabrics

Food packaging - grease-resistant paper (e.g., microwave popcorn bags, takeout containers, bakery bags, some paper plates)



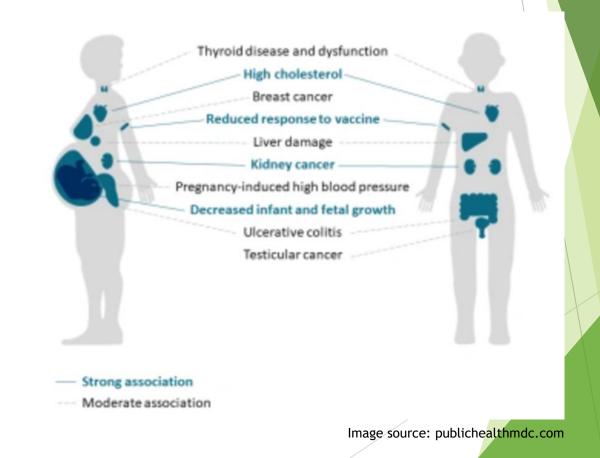
### Secondary sources:

Treated wastewater and biosolids from wastewater

Agricultural crops and the food chain Drinking water

#### Health Effects of PFAS

- Effects can differ between individual PFAS chemicals
- Cholesterol levels
- Immune system effects
- Increase in some cancers
- Developmental effects
- Reproductive effects



Forever
Chemicals How to
reduce
exposure?

Avoid	Avoid grease-resistant papers, avoid reheating food in original packaging
Choose	Choose alternative containers: glass, stainless steel, and ceramic
Choose	Choose alternative cookware: cast iron, stainless steel, ceramic-coated
Choose	Choose alternative water-repellent fabrics: wool is naturally water-repellent
Do not assume	Do not assume "eco-friendly" means PFAS-free
Reduce	Reduce use to help break the cycle

## Reducing Use is One of Our Best Options for a Healthier You, Healthier Planet

- Elevated greenhouse gases, persistent chemicals, and microplastics are now pervasive world-wide
- You have some control over personal exposure and impacts to the environment
- The best long-term option is to reduce use



Image source: stlcityrecycles.com