

The background of the cover is a photograph of the United States Capitol building in Washington, D.C., taken from a low angle. In the foreground, a person wearing a face mask and a backpack stands on a grassy area, looking towards the building. The overall tone is slightly hazy or overcast.

[Union of
Concerned Scientists



Catalyst

Volume 26, Fall 2026

Will Congress Give Big Oil a Free Pass?

*Immunity for climate
pollution is in play*

Making Elections More Equitable

A Win for EV Battery Recycling

Catalyst, ISSN 1539-3410, is published quarterly by the Union of Concerned Scientists. Text of articles from *Catalyst*, duly acknowledged, may be reprinted free of charge. Artwork may not be reproduced.

© 2026 Union of Concerned Scientists

 *Catalyst* is printed on chlorine-free recycled paper with 100% post-consumer content.

EDITORIAL DIRECTOR

Abby Figueroa

MANAGING EDITOR

Bryan Wadsworth

EDITOR

Pamela Worth

PRODUCTION MANAGER

Heather Tuttle

CONTRIBUTING WRITERS

Seth Michaels

Michelle Rama-Poccia

Eric Schulz

Claudia Ward-de León

LAYOUT & DESIGN

Cynthia DeRocco

ART DIRECTOR

Ryan Fleischer

CONTRIBUTING DESIGNERS

Bill Cotter

Nick Davis-Iannaco

Omari Spears

FRONT COVER

Andrew Leyden/NurPhoto/AP

BACK COVER

Ryan Fleischer/UCS

The Union of Concerned Scientists puts rigorous, independent science into action, developing solutions and advocating for a healthy, safe, and just future.

This publication is financed by contributions from individual members. You can join UCS by making a tax-deductible contribution of \$20 or more on our website (ucs.org/donate); you can also send your contribution to UCS Development, Two Brattle Square, Cambridge, MA 02138-3780.

BOARD CHAIR

Kim Waddell, PhD

PRESIDENT & CEO

Gretchen T. Goldman, PhD

NATIONAL HEADQUARTERS

Two Brattle Square
Cambridge, MA 02138-3780

PHONE

(617) 547-5552

EMAIL

ucs@ucs.org

WEB

ucs.org

ON THE COVER: Smoke from Canadian wildfires blanketed Washington, DC, this summer. Meanwhile, the fossil fuel companies that contribute to climate change and extreme weather rake in record profits. See p. 8 to learn more.

Reimagining What's Possible



By Dr. Gretchen Goldman



The late Sam Rayburn, a US representative from Texas and the longest-serving Speaker of the House, once said, “Any jack### can kick a barn down, but it takes a carpenter to build it.”

The second Trump administration, disinterested in respecting law, process, and the importance of science in government, has used every opportunity to kick down scientific institutions intended to serve the public good. But the scientific community has banded together to document, fight against, and limit the damage. We’ve also come together in hopes of rebuilding something better.

Earlier this month, I attended a multiday gathering of Union of Concerned Scientists partners and our own staff with the purpose of reimagining the role of federal science in policy decisions. It was wonky and wonderful, and I’m energized by the fresh perspectives, bright ideas, and solid plans we created and shared—and I’m motivated to get to work making them a reality.

As my colleague and fellow former federal scientist Dr. Julian Reyes points out (p. 16), our existing institutions and policies had room for improvement before President Trump began dismantling them. I’m hopeful for the chance to help create systems and structures that benefit more people. Your support of UCS helps us lean into the role of skilled “carpenters” who can thoughtfully and intentionally build a more robust scientific enterprise from the wreckage, one that better serves everyone in our nation.

You’ll see a lot of this future-oriented thinking reflected in the pages ahead, including the case for proportional representation as an improvement over our current winner-take-all electoral system (p. 12), how community solar is a solution for inequitable access to reliable power (p. 18), and how a state victory for electric vehicle battery recycling can be replicated across the United States (p. 22). In upcoming issues of *Catalyst*, we’ll report back on our progress in reimagining how federal science can work even better for the United States. I’m excited to undertake this project, with your support.

In just a couple of weeks, the midterm elections will determine the composition of our Congress, along with state and local leadership. I hope everyone reading these words who is eligible to vote in the United States is registered and planning to make your voice heard this fall. Whatever the outcome, UCS is prepared to keep fighting for science and its role in improving our health, safety, and climate. {C}

Gretchen Goldman, PhD, is president and CEO of UCS. Read more from Gretchen on our blog, *The Equation*, at blog.ucs.org.



UCS ON THE RECORD . . . AND HAVING AN IMPACT



“There are marine heat waves in every ocean basin in the world right now releasing a ton of heat into the atmosphere, no doubt influencing weather patterns throughout the planet and leading to these absolutely unprecedented heat waves.”

DR. MARC ALESSI, scientist in the UCS Climate Program, on France24 discussing this summer’s record-breaking heat

“Yes, of course, if you bend all the rules, you can do things quickly. . . . [T]hat should not be confused with anything related to a nuclear power reactor that’s capable of producing electricity in a stable and safe way.”

DR. EDWIN LYMAN, UCS director of nuclear power safety, on NPR discussing how the Trump administration has relaxed regulations related to nuclear reactor construction

“This is a blueprint for how other states should address EV battery recycling policy. If the US follows this standard, by 2050 we could meet about half of our demand for these minerals in EVs.”

DR. JESSICA DUNN, scientist in the UCS Clean Transportation Program, in a *Waste360* article about a Colorado law that requires the recycling of electric vehicle batteries (see p. 22)

“Science is under a coordinated assault right now. We’re up against powerful actors and they are coordinating their efforts on a very specific type of research that can be used to hold polluters accountable and threaten that power.”

DR. CARLY PHILLIPS, UCS senior scientist, in an *E&E News* story about Big Oil’s attempts to shield itself from legal responsibility for climate damages

“We need good science to help us get ready for [climate] impacts that are coming our way instead of putting our heads in the sand and denying it’s happening, and as a result, putting more people’s lives and safety at risk.”

DR. RACHEL CLEETUS, director of the UCS Climate Program, in a *PBS NewsHour* interview about the impacts of climate change on farmers

“Placing political appointees in the position to review and determine funding would replace merit with loyalty to a political leader.”

DR. JULES BARBATI-DAJCHES, analyst with the Center for Science and Democracy at UCS, in an *Inside Higher Ed* article about a Trump administration proposal to change the way federal grants are distributed (see p. 5)



[FEATURES]

8 **Big Oil Looks for a Free Pass**

Polluters step up efforts to avoid blame for climate damages

12 **Making Our Democracy Work for All of Us**

UCS thinks big when it comes to US election reforms

[ALSO IN THIS ISSUE]

2 *First Principles* **Reimagining What’s Possible**

3 *Field Notes*

4 *Advances*

16 *Inquiry* **Interview with Julian Reyes**

18 *Ideas in Action* **Casa Pueblo Innovates Community Solar**

21 *Donor Profile* **Lights, Camera . . . Science!**

22 *Final Analysis* **Colorado Shows the Rest of the Country How to Handle EV Batteries**

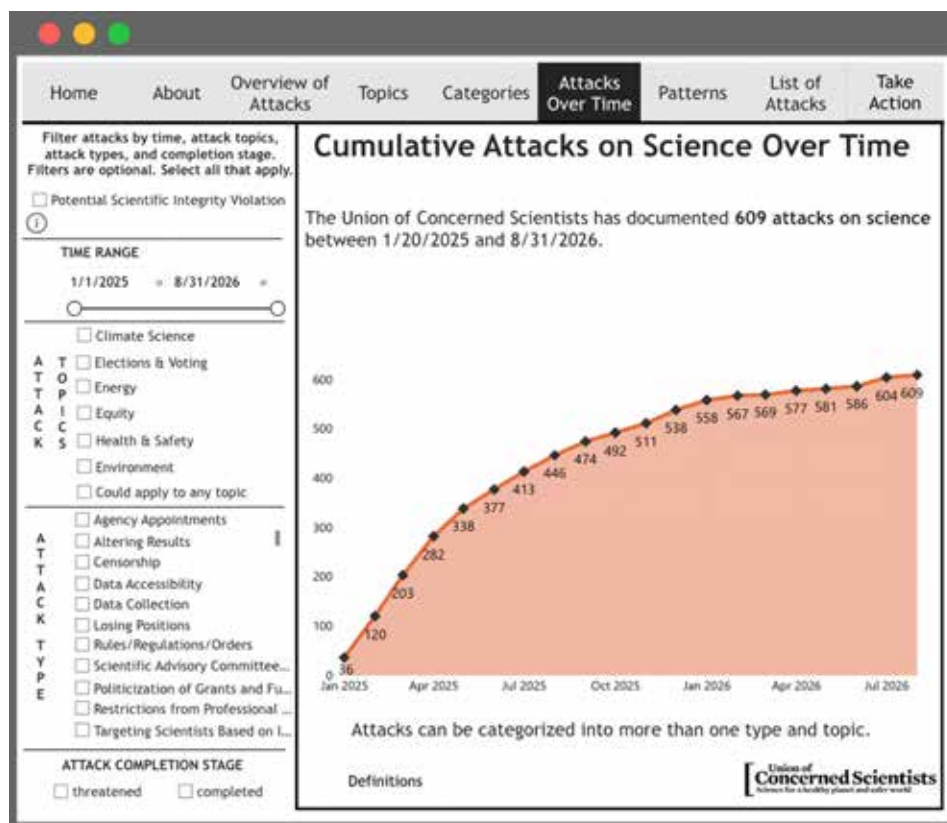
UCS Unveils Interactive Tool for Tracking Attacks on Science

The Union of Concerned Scientists has been documenting attacks on federal science and scientists starting with the George W. Bush administration. But since President Trump took office for the second time, the pace and scale of attacks have been dizzying.

In response, UCS has created a first-of-its-kind system for recording and categorizing attacks as they happen—and with it, a new interactive interface that anyone can use to compile data and support science advocacy. The public can access the tracker at attacksonscience.org, using filters to sort attacks by type, by topic, and by agency.

Government research is critical to our nation's response to toxic pollution and climate change, natural disasters like hurricanes and wildfires, and outbreaks of disease like Ebola and cyclosporiasis. The Trump administration's anti-science actions put us at risk by weakening the federal government's ability to better understand, prepare for, and counteract these threats.

According to the new Attacks on Science Tracker, the president and his administration launched 609 such attacks between Inauguration Day 2025 and August 31, 2026—*averaging 30 a month*—and 60 percent of them could have a negative impact on public health and safety. For context, UCS recorded 207 attacks during the entire first Trump administration, 96 during the two terms of George W. Bush, and 21 during the Obama and Biden administrations *combined*.



These attacks include controlling federal scientists' public communication, altering research findings, mass layoffs of scientists, disbanding scientific advisory committees, restricting access to data, eliminating data collection, and the politicization of research funding.

"The Attacks on Science Tracker shows how the Trump administration has put politics ahead of scientific evidence and public well-being," says Dr. Jules

Barbati-Dajches, analyst in the Center for Science and Democracy at UCS and project lead for the tracker. "Its data highlight the need for scientific integrity protections including the Scientific Integrity Act, which would make political interference in federal science illegal. Passing the act might have prevented about 33 percent of the attacks we've seen."

Barbati-Dajches says their team built the tracker as a multipurpose tool for a broad audience. "We want people to use it to digest a lot of information quickly. We want advocates to have the option to download graphics to use in letters to the editor, articles, or public hearings. Essentially, we created this tool for anyone who cares about science."

**THE TRACKER IS UPDATED ONCE A MONTH.
SCAN THE QR CODE TO LEARN MORE, OR
VISIT [ATTACKSONSCIENCE.ORG](https://attacksonscience.org).**



Opposition Mounts Against Anti-Science Rule Change

This spring, the Trump administration proposed a change to the way it funds research that would give political appointees unprecedented power to make funding decisions. It would:

- Deny grants that don't align with the administration's beliefs
- Allow grants to be terminated if the results are politically inconvenient
- Base decisions on applicants' history and organizational "affiliations"
- Require pre-approval for scientific conferences, society memberships, and publications
- Upend science in the United States as we know it

Political appointees with no subject matter-specific expertise would be deciding who receives funding for vaccine development, research into air and water

pollution, and advancing the state of the science on health care for women, people of color, and LGBTQ+ people.

And it's not just science—the proposed rule would affect *all* federal discretionary funding.

Before the public comment period closed this summer, UCS submitted a letter in opposition, shared a guide to help people submit their own comments, and asked our supporters to comment. In 45 days, *regulations.gov* noted that nearly 500,000 comments were submitted—a record swell of opposition. This number includes 26,594 comments and signatures that UCS organized and delivered.

As of this writing, the House of Representatives passed a continuing resolution to fund the government that includes a provision to delay implementation of the rule until December. You can urge your members of Congress to block the administration's rule change entirely.

UCS Commentary Wins Writing Award



A trio of thought pieces featured on the UCS site *The Equation* won the American Society of Journalists and Authors Writing Award for Best

Opinion/Op-Ed. The posts, authored by former UCS Communications Fellow and Pulitzer Prize finalist Derrick Jackson, examine the effects of Trump administration cuts to federal agencies that are supposed to protect public health and our environment, and call out the political appointees who are abusing their power to overturn climate and other policies. The judges noted Jackson's "profound emotional journey from anger to confusion, hopelessness to rage" and his "beautiful and easy to follow language." You can find his posts at act.ucs.org/fall26-award.

2X TOGETHER FOR SCIENCE MATCH DEADLINE: DECEMBER 31, 2026

When science is sidelined, people are harmed.

But the scientific community—including UCS members like you—is stronger when it comes together. That's why UCS is mobilizing scientists alongside the public to oppose the Trump administration's attacks on science, pressuring members of Congress to protect their constituents and science, and pushing for progress wherever we can make it, including at the state and regional levels.

With this urgent work in mind, generous UCS supporters have stepped up to give \$250,000 to create the 2X Together for Science Match. Between now and December 31, every qualifying membership donation we receive counts toward the match, dollar for dollar, to make twice the impact.

Visit act.ucs.org/fall26-together and make a gift today!



Scientists and Science Supporters Get Ready to Respond to Election Interference



Through our Science Rising initiative (sciencerrising.org), UCS has been working for months in preparation for any anti-democratic tactics the Trump administration might employ to undermine the midterm elections.

By the time you read this, we will have hosted five national calls to mobilize the scientific community against authoritarianism, featuring panelists who have spoken out about what it takes to speak truth to power in a time when many scientists are afraid of losing their funding or even their jobs. “We received more RSVPs to the first call than any online event UCS has ever hosted. More than 1,000 people attended,” says Matt Heid, senior director of strategy and communications at UCS.

During our call in July, the authors of *On Courage: How to Be a Dissident in*

an Age of Fear related lessons from more than 100 activists around the world. “Our speakers agreed that the most common factor that leads someone to take action is being asked by someone they know, which shows how important it is for all of us to reach out to our personal connections,” says Heid.

The next step has been to hold on to that interest and recruit people to become part of the Science Rising Action Corps. Those who join will have opportunity to take greater actions. For example, some of the supporters volunteering to protect democracy will leverage their expertise during the upcoming midterm elections. Volunteers in states that UCS partner Protect Democracy has identified as being possible targets for election interference are receiving training in response tactics.

“We hope none of this will prove to be necessary come November 3, but if it does, we are ready,” says Heid.

This work is part of a greater effort at UCS this year to mobilize the scientific community and science supporters. The UCS Science Network provides a fertile recruiting ground. It is made up of concerned and motivated experts who have volunteered to apply their knowledge and technical skills for the public good, and who take action across the country to protect science and democracy.

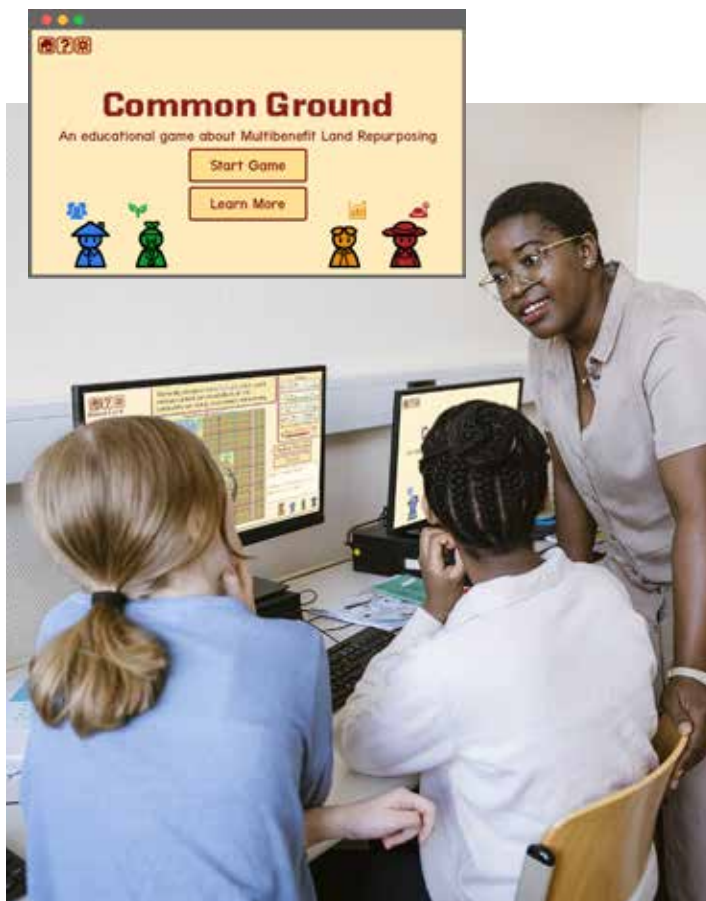
“We issued a call for all science supporters earlier this year: to advocate for science with their members of Congress; to enact structures of independent scientific advice outside of the federal government, where they are being dismantled; and to speak up and push back against anti-science attacks from the administration,” says Melissa Varga, associate director of scientist organizing at UCS.

And the scientific community responded: membership in the UCS Science Network has swelled to new heights, with more than 26,000 experts in 2026—a 50 percent increase since the fall of 2024. The number of early-career scientists and experts who joined the Science Network online grew by 51 percent in 2026.

Whether you’re reading this before or after the midterm elections, it’s never too late to welcome additional scientists to the cause. If you’re a scientist, economist, engineer, public health specialist, or other technical expert, sign up to join the Science Network at act.ucs.org/fall26-scinet. And if you’re ready to take action now, go to sciencerrising.org and check out our list of resources on ways you can get involved.

To those who have already volunteered, and those non-scientists who continue to support our work, thank you—we need all of you.

Ready Farmer One: UCS Sponsors an Educational Game about Agriculture



A new online game designed and developed in partnership between UCS and students at Harvey Mudd College in Claremont, California, allows players to explore the costs, benefits, challenges, and opportunities of repurposing some cropland for other uses that protect soil and water. Find it at act.ucs.org/fall26-common-ground.

“Common Ground” puts players in Townsville, a California farming community, and tasks them with working together to improve the town’s economy, environment, and public health. UCS has been working in California’s Central Valley for years to help communities and decisionmakers in the state manage climate impacts including droughts, floods, and extreme heat, which are converging as a consequence of unsustainable, polluting, and extractive agricultural practices. “Common Ground” gives players the chance to balance competing priorities and deal with the unintended consequences of resource management—a fictional game about real challenges Californians face.

ACTION CENTER: HELP US MAKE PROGRESS THIS FALL

UCS has ample opportunities for you to make your voice heard. Sign onto our letters to Congress, and join one of our Science Rising trainings.

PROTECTIONS FOR SCIENTISTS

Federal scientists need strong protections to ensure their work is not distorted, suppressed, or subject to retaliation because of political interference. The Scientific Integrity Act (p. 4) would help ensure government decisions are guided by the best available evidence. Demand that your members of Congress institute scientific integrity protections:

act.ucs.org/fall26-si-action

CLEAN ENERGY IN YOUR STATE

We should all have access to the health and economic benefits that come with a transition to clean energy. Tell your state leaders to keep accelerating on clean energy:

act.ucs.org/fall26-energy-action

SCIENCE IS RISING TO PROTECT DEMOCRACY

Join the Science Rising Action Corps today (p. 6) to learn how you can help safeguard democracy by responding to possible election interference during the midterms:

act.ucs.org/fall26-science-action

EVIDENCE-BASED VOTING REFORM

We need science-based legislation to expand voting rights, restrict partisan gerrymandering, and limit the influence of money in politics (p. 12). Urge your members of Congress to support the For the People Act, the John R. Lewis Voting Rights Act, and the Fair Representation Act:

act.ucs.org/fall26-voting-action

NO IMMUNITY FOR BIG OIL

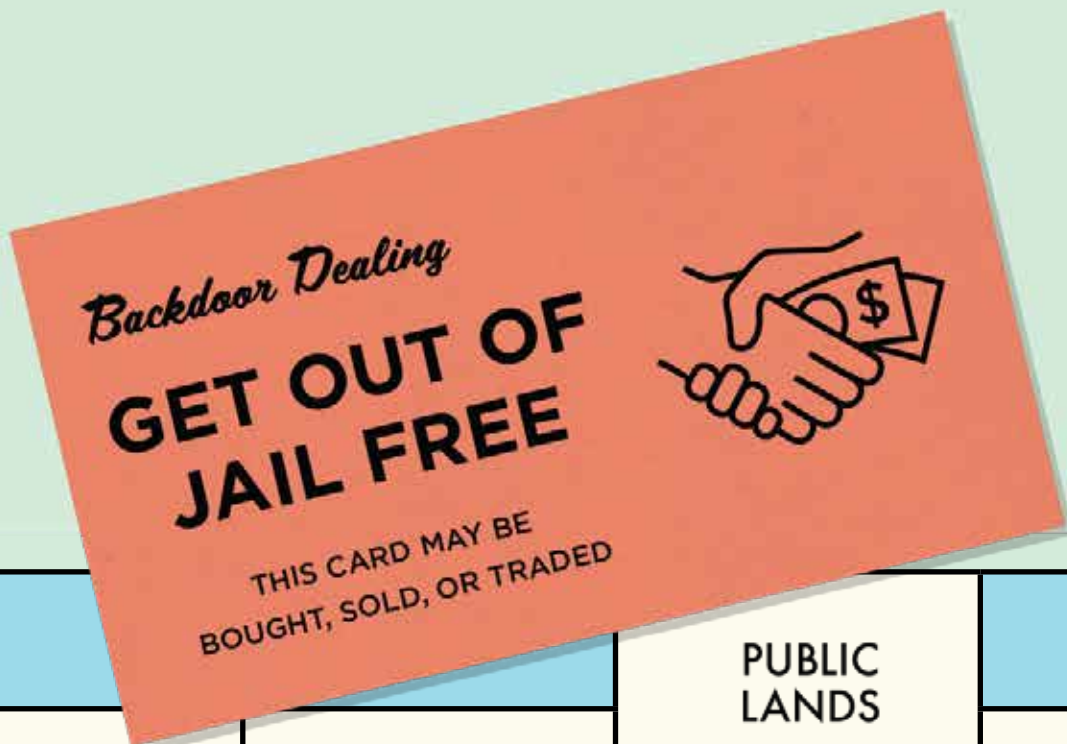
As climate disasters grow more extreme, communities around the United States are seeking to hold the fossil fuel industry accountable for its deadly and costly harms. But legislation in Congress would shield Big Oil from legal liability, denying access to justice for millions of people (p. 8). Demand that your members of Congress reject a liability shield for the fossil fuel industry; scan the QR code or visit act.ucs.org/fall26-oil-action.



BIG OIL LOOKS FOR A FREE PASS

UCS scientists have found yet another link between the fossil fuel industry and climate damages. No wonder the industry is ramping up its efforts to evade accountability.

BY ERIC SCHULZ



DEPT OF
AGRICULTURE



\$ \$

DEPT OF
TRANSPORTATION



\$ \$

PUBLIC
LANDS



DEPT OF
JUSTICE



\$ \$

EXECU
ORD





A contempt for corruption is one of the most commonly shared beliefs across political, geographic, and demographic lines: A whopping 92 percent of US voters consider corruption a “very big” or “moderately big” problem in politics today according to the Brennan Center for Justice, a nonprofit law and public policy institute. This is hardly a shocking response to a system that has enabled President Trump’s net worth to soar by *more than \$2 billion in a single year*.

The Trump administration makes no effort to disguise its cozy relationship with the fossil fuel industry: More than 50 executive branch appointees and nominees come from major oil and gas companies and their industry trade groups. The fact that the White House has put former staff of BP, ExxonMobil, Shell, and the American Petroleum Institute in charge of energy and land policy is corruption, plain and simple—but it is even more insidious than it appears.

The fossil fuel industry is not merely focused on maximizing profits—it is attempting to cover up decades of lies to evade accountability for the harm its products have caused. It has been a year since the Union of Concerned Scientists published *Decades of Deceit*, a report chronicling 60-plus years of lies from fossil fuel executives, who were warned as early as 1959 that their products

would cause climate change drastic enough to melt the ice caps and flood coastal cities. Now, facing headwinds of damning new research and an ever-growing stack of lawsuits seeking damages for climate harms, fossil fuel companies are working every lever of power at their disposal in Washington, DC, to keep their past from catching up with them.

INTENSIFYING AN ALREADY DIRE WATER CRISIS

The latest evidence of the damage fossil fuels are doing to our world comes in a peer-reviewed study authored by experts from UCS and the University of California, Merced, published in the journal *Communications Earth & Environment* this summer. The study—the first of its kind to attribute worsening drought conditions to the world’s largest oil, gas, coal, and cement producers (known as the “carbon majors”)—demonstrated that emissions from these companies over the last 75 years are responsible for the western United States losing an amount of water equal to *six times* what all of California’s cities use in a year. This reduction in water availability exacerbates a widening seasonal gap between when water is available and when it is needed most. You can read more about these results (in English and Spanish) at act.ucs.org/fall26-water.

UTIVE ER	LOSS & DAMAGE		TAXPAYER SUBSIDIES	
		WHITE HOUSE  \$ \$ \$		CONGRESS  \$ \$ \$

The environmental and human impact is dire: lost jobs, higher utility bills, and even communities running out of water. These are disproportionately low-income households and communities of color that are reliant on groundwater. For years, agriculture has been a bedrock of the region's economy. Now, job loss is a serious threat as farming becomes less prominent in a water-stressed world.

WHAT IS ATTRIBUTION SCIENCE?

Attribution science shows us precisely how much climate change is shaping and changing our world. It allows us to quantify the role climate change plays in shaping things like extreme weather events, sea level rise, or surface temperature increases across the world.

Attribution science was first used to offer vital insights on long-term climate trends. Today, advances in climate modeling and statistics make it possible to provide precise quantifications of the human influence on extreme weather events and the resulting societal impacts. It can answer questions like:

How much has Earth's temperature increased because of human activities?

Fossil fuel pollution has driven a 1.1°C (2.1°F) increase in the global average surface temperature since the late 19th century. Trend attribution helps us answer questions like this by detecting human influence on long-term climate trends.

What emissions sources are contributing the most to climate change?

Emissions from the burning of fossil fuels are the primary contributor to human-caused climate change. Source attribution helps us answer questions about how emissions traced to specific sources, like the major fossil fuel companies, contribute to global climate change and its impacts.

UCS has published multiple peer-reviewed articles in the field of attribution science, including the role fossil fuels play in sea level rise, forest fires in the western United States, and ocean acidification.

Learn more at act.ucs.org/fall26-attribution-science.

The study is the latest UCS contribution to the field of attribution science, which compares the climate conditions we are experiencing today with what Earth's climate would be like without human influence (see box). The field has been recognized by the United Nations Intergovernmental Panel on Climate Change as a critical tool for understanding the impacts of climate change, and has also been reviewed and affirmed by the National Academy of Sciences. Fossil fuel corporations, which have a long tradition of attacking robust science that threatens their business model, now have attribution science in their crosshairs.

“Attribution science is a critical piece of scientific evidence for holding big polluters accountable for their role in the climate crisis,” says Dr. Carly Phillips, senior scientist in the UCS Fossil Fuel Accountability Program and co-author of the recent analysis. “Fossil fuel corporations and their lobbyists recognize accountability as a threat to their bottom lines, which is why they are now attacking attribution science just like they’ve attacked peer-reviewed climate science for decades.”

GUTTING PUBLIC HEALTH PROTECTIONS AND CORPORATE TRANSPARENCY

The Trump administration, to the delight of high-polluting industries, has eviscerated countless public health protections in the last 18 months. A UCS report (act.ucs.org/fall26-dirty-air) found clean air exemptions have been granted to nearly 200 coal plants and chemical manufacturers. The resulting excess pollution will primarily affect the 4.6 million people who live within two miles of these facilities, which worsen air quality and exacerbate climate hazards, health harms, and social stressors. These are not decisions made merely at the behest of fossil fuel companies—they’re being made by former fossil fuel executives working for the White House.

During a summer marked by fatal heat waves, a summer in which cities across the country were buried in wildfire smoke, and a summer during which climate scientists predicted that the largest El Niño on record will sweep the globe, the Trump administration turned its eyes away from the climate harms and proposed nixing a rule that requires public companies to disclose climate-related financial risks.

A rule adopted in 2024 by the US Securities and Exchange Commission (SEC) provides regulators and investors with information including the amount of heat-trapping emissions businesses produce, how climate impacts and the clean energy transition might affect businesses, and plans for meeting carbon emissions reduction targets. When proposed in 2022, the rule received overwhelming support from investors, who said they needed such information to independently assess the real risk to businesses.

Eliminating the rule was a named priority of the American Exploration & Production Council, a trade association representing the country's largest oil and gas companies. More than 10,000 UCS supporters submitted public comments urging the SEC to keep the rule in place, noting that “depriving investors of material climate-related information will only serve to under-



As Big Oil raked in record profits, people across the United States felt the effects of climate change this summer. Clockwise from top left: A heat wave scorched Washington, DC; smoke from Canadian wildfires spread throughout the United States; Hurricane Marie brought heavy surf and coastal flooding to Southern California; Lake Powell's water was at its lowest level since 1957.

mine efforts to assess and mitigate climate risk, at the expense of economic stability.”

“Rescinding the 2024 rule would clearly serve the Trump administration’s strategy of trying to bury the evidence of climate change at the expense of investors and the public while insulating high-emitting industries from accountability,” says Laura Peterson, senior analyst in the UCS Fossil Fuel Accountability Program. “This proposal represents the latest in the administration’s scorched-earth tactics to dismantle federally funded scientific institutions and instruments that produce data about our changing climate, often in contravention of congressional mandate.”

TILTING THE SCALES TOWARD INJUSTICE

For years, UCS has tracked the growing field of climate litigation against fossil fuel companies. Nearly 90 million people in the United States are currently represented in state, Tribal, county, municipal, and territorial government lawsuits against corporations including BP, Chevron, ExxonMobil, and Shell.

Against this backdrop, fossil fuel staffers are now joining the Department of Justice (DOJ). The assistant attorney general for legislative affairs, for example, was previously senior counsel for the American Petroleum Institute. This fossil fuel-fortified DOJ is now waging war against these climate lawsuits. Most recently, it sued to block the state of Minnesota’s lawsuit against the American Petroleum Institute, ExxonMobil, and Koch Industries—the fifth such suit filed by the Trump admin-

istration against states seeking to hold fossil fuel companies accountable for their contributions to the climate crisis. Two of those suits, against Hawai’i and Michigan, have already been dismissed.

This goes hand-in-hand with the ongoing elimination of public health protections. The Trump administration gutted the DOJ’s Environment and Natural Resources Division—and then stripped “Environment” from the division’s name entirely, replacing it with “Energy.” “The administration is sending a clear signal that its focus is energy—by which it means fossil energy—and that enforcement of environmental policies and protections is not a priority,” says Kathy Mulvey, director of the UCS Fossil Fuel Accountability Program.

In case those routes don’t provide enough cover, fossil fuel companies are turning to the nation’s highest court for a reprieve. The US Supreme Court is considering a petition by defendants ExxonMobil and Suncor Energy to block a 2018 climate deception case filed by the City and County of Boulder, Colorado. UCS led an amicus brief this summer alongside leading academic experts on fossil fuel industry disinformation, offering a fact-intensive historical account of ExxonMobil and Suncor’s concealment and denial of the hazards they knew would result from the normal use of their products. The Supreme Court will hear arguments in the case—one tactic in a coordinated effort supported by the Trump administration to eliminate states’ and communities’ ability to hold the fossil fuel industry accountable for its role in the climate crisis—this fall.

(continued on p. 20)



MAKING OUR DEMOCRACY WORK FOR ALL OF US

Voting rights are under threat, with more obstacles to fair representation than there have been in decades. It's time to think big about elections.

BY SETH MICHAELS



For the past decade, the Center for Science and Democracy at the Union of Concerned Scientists has been exploring the science of elections. Working with experts and community groups around the country, UCS staff have been looking at how elections are run, where our democracy is falling short, and what we can do to improve the process.

A healthy democracy—in which everyone gets a chance to participate—helps ensure that science and evidence will drive decisions that benefit everyone, rather than the narrow interests of the most powerful. In turn, social science research helps us identify the biggest challenges to holding free and fair elections, and points to the best practices that can help ensure everyone gets a chance to meaningfully participate. This is especially important for communities that have historically been intentionally excluded from the process, including voters of color.

There is new urgency to this work now that a series of Supreme Court rulings have chipped away at voting access via voter suppression and gerrymandering. By keeping people from the ballot box, the Trump administration will have fewer obstacles to pursuing its anti-science practices.

THE COURT TARGETS THE VOTING RIGHTS ACT

The right to vote for people of color has been under attack since Reconstruction, but in the past decade, more targeted attacks have weakened protections for voter enfranchisement. In 2013, the Supreme Court's ruling in *Shelby County v. Holder*

overturned and weakened parts of the Voting Rights Act of 1965, a signature achievement of the civil rights movement that enables the federal government to intervene to prevent racial discrimination in elections. Since this ruling, the floodgates have opened: 30 states have implemented more than 100 new restrictions on voting, disproportionately affecting racial and ethnic minorities.

The court's decisions in the years since have weakened campaign finance laws, encouraged large-scale voter purges, sanctioned partisan gerrymandering, and limited the ability of voters and the federal government alike to challenge racial discrimination in the electoral process. For example, after the Supreme Court's 2019 ruling in *Rucho v. Common Cause*, state legislatures now have nearly unlimited freedom to redraw their electoral maps to eliminate majority-minority districts without needing federal approval, diluting Black voters' influence by spreading their votes across multiple districts (see diagram on p. 15).

In his 2005 confirmation hearings, now-Chief Justice Roberts described the judicial branch as an “umpire” whose sole role is to “call balls and strikes.” To put it lightly, under his watch, the Supreme Court has gone well beyond that modest definition. The majority Roberts leads has upended the rule of law in this country, overturning numerous precedents and inventing new doctrines that fundamentally reshape relations between the branches of government and between the federal government and the voters and constituents whom it should serve. Nowhere is

this more evident than the court's repeated attempts to undermine the Voting Rights Act.

This spring, the Supreme Court's 6-3 decision in *Louisiana v. Callais* effectively gutted Section 2 of the act, with the majority opinion holding that states cannot use racial considerations in drawing maps that allow minority groups to elect their preferred candidates. This ruling narrows the law's more than 60 years of protections against discriminatory redistricting efforts to dilute racial and ethnic minorities' political power.

That decision also makes it virtually impossible to overturn maps that effectively discriminate against these groups, only allowing challenges to maps that can be tied to provable, intentional discrimination based on race. Since the 2019 decision in *Rucho v. Common Cause*, partisan gerrymandering is considered unreviewable by the court, so blatantly discriminatory maps are permissible if their primary motive is partisan advantage rather than racial discrimination—and of course no state official will admit to gerrymandering based on race.

Within days of the *Callais* ruling, multiple state legislatures redrew their congressional district maps. The new maps take the Supreme Court's guidelines as encouragement, carving up old districts that comprised Black communities in Alabama, Louisiana, and Tennessee, replacing them with majority-White districts with lopsided partisan preferences. It's a disturbing but completely predictable result of the Roberts court's decisions.

The Voting Rights Act was passed—and reaffirmed and clarified repeatedly by Congress in the subsequent years—because our democratic process was, for much of its existence, willfully and explicitly discriminatory. We've made halting and imperfect progress toward a more free, fair, and equal system, but the Supreme Court's rulings turn back the clock.

The danger is real. That's why now is the moment to think bigger about how we run our elections—not just tweaking around the margins, but reimagining how our legislators are chosen.

OUR CURRENT SYSTEM IS NOT REQUIRED BY THE CONSTITUTION—THE HOUSE IS COMPOSED ENTIRELY OF SINGLE-MEMBER DISTRICTS ONLY BECAUSE A 1967 LAW PASSED BY CONGRESS REQUIRES IT.

REPRESENTATION THAT ACTUALLY COUNTS EVERYONE

Today, state representatives to the US Congress all come from single-member districts. Each state is apportioned a certain number of districts based on its population, and states large enough to send multiple members are drawn into districts that each elect one representative. In most cases, this drawing (or redistricting) is done by the state legislature after the once-a-decade US census. The winner for each district is the candidate with the most votes. It doesn't matter whether the winner received 80 percent of the votes or a narrow plurality. That's what gives gerrymandered maps their power: If a state's majority party can divide its opposition into small minorities in multiple districts, it can prevent its opponents from holding any power in Congress.

The norm of only redistricting once a decade has been broken. Texas redrew its maps in 2003, just two years after a regular post-census map, and, with encouragement from President Trump and court decisions like *Rucho v. Common Cause*, Texas once again redrew its map this year for blatant partisan advantage, kicking off a multistate redistricting battle that upended the maps for this fall's elections. All of that happened before the *Louisiana v. Callais* ruling gave state legislatures nearly unfettered power to draw their preferred maps free of the Voting Rights Act's limits.

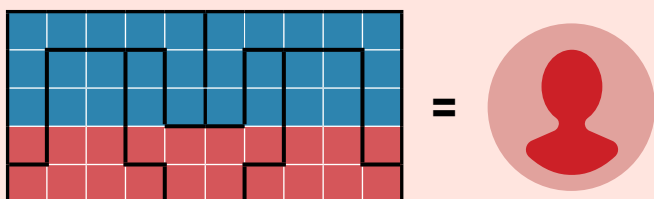
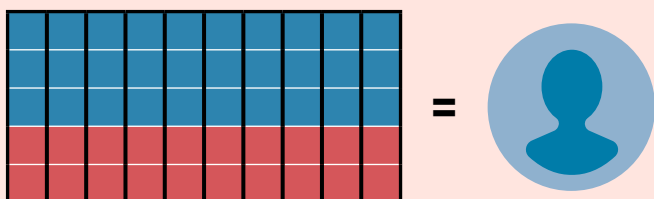
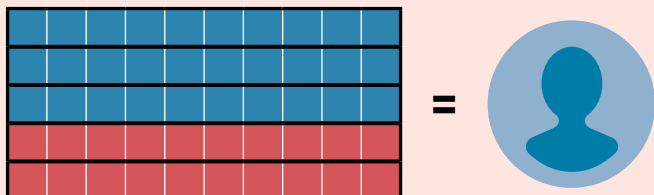
Winner-take-all districts are susceptible to this kind of redrawing, distorting the preferences of voters and giving incumbents and powerful interests the ability to pick and choose which voters get a voice, and which get excluded. This also traps voters and legislators in a two-party system, in which two parties exchange power back and forth, excluding anyone who doesn't fit or identify with either party.

This system isn't required by the Constitution, and it's not the only way to pick legislators. Throughout US history, states have tried different methods for choosing their congressional delegations. The US House of Representatives is composed entirely of single-member districts, but only because a 1967 law passed by Congress requires it. (The size of the House is also capped by a law called the Reapportionment Act of 1929, which results in states occasionally losing seats as other states grow in population.)

Meanwhile, around the world, many national legislatures are chosen via a system called proportional representation. In this system, a district sends *multiple* members to the legislature, with multiple parties eligible to participate. The winners obtain seats based on their share of the vote: If Republicans receive a third of the votes, they get a third of the district's seats. Voters would generally end up with at least one representative who actually shares their values.

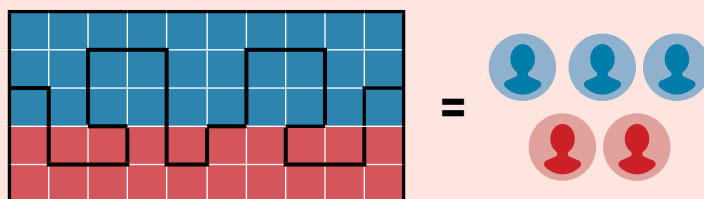
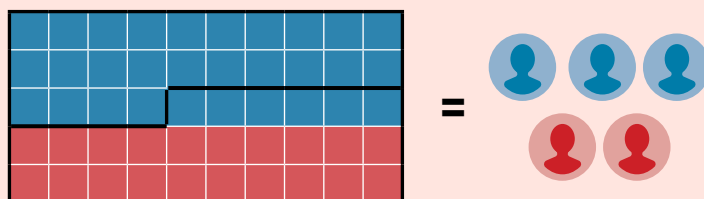
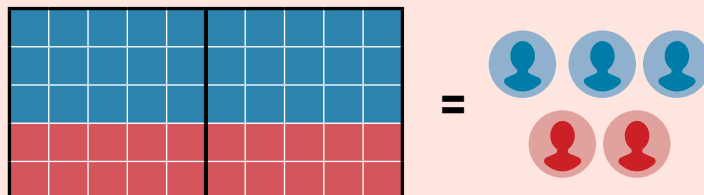
OUR CURRENT SYSTEM

- Many small districts
- Single member, winner takes all
- Vulnerable to gerrymandering



FAIR REPRESENTATION

- Fewer, larger districts
- Multimember, proportional representation
- Fair, no matter the shape of the districts



While it's not common in the United States, there are some examples of proportional representation here, including local officials in Cambridge, Massachusetts; Eastpointe, Michigan; Minneapolis, Minnesota; and Portland, Oregon.

Research by a range of scholars has found that countries that use proportional representation tend to elect legislatures that better reflect their constituents' values, and are more likely to adopt policies that the majority of citizens want. Research also shows proportional representation reduces polarization by producing multiparty coalitions and increases community engagement by making more elections genuinely competitive. It's also worth noting that this system tends to encourage more political parties and greater competition, while expanding opportunities for compromise.

LOOKING AHEAD

At the Center for Science and Democracy at UCS, experts and outreach staff have been working closely with social scientists, community groups, and state and local election administrators to identify best practices for running free and fair elections. That includes evidence-based efforts to improve ballot design, more transparent and accessible election data, and analyses of turnout

and ballot rejection rates to understand where gaps and inequities exist.

Increasingly, we've found that proportional representation with multimember districts is gaining favor among voting rights advocates and experts. By electing multiple officials from a district, proportional representation increases fairness and makes it far more difficult, if not impossible, to gerrymander voters out of the picture. That will give more people a stake in every election and help counterbalance the deep, entrenched racial inequities that have plagued US elections.

That's why the team at the Center for Science and Democracy is excited to explore and advocate for big-picture electoral reforms in communities across the country, including proportional representation.

We can and must work toward a multiracial, participatory democracy. It's the right thing to do to build a fair and just society, and it's necessary for science to flourish and for science to inform government policies that advance the public good. We can't ignore the importance of a healthy democracy—and that means exploring big reforms in the way we choose our leaders. {C}

Seth Michaels is a senior writer at UCS.

Out of Federal Service, But Still Serving the Public

INTERVIEW WITH JULIAN REYES

Dr. Julian Reyes used to work for the federal government. Now, he's helping UCS sue the federal government. A former government scientist who served at the White House and the Departments of Agriculture, the Interior, and State, Reyes plays a key part in pushing back against the Trump administration's anti-science actions in his role as UCS chief of staff.

Soon after joining UCS, you helped the organization file a lawsuit challenging the president's executive order censoring historical and climate information at US national parks. How did you get involved in this litigation?

JULIAN REYES: This order included removing exhibits and signs in national parks that mentioned slavery, colonization, the oppression of Indigenous Americans, civil rights, and climate change. I became a declarant in our suit on behalf of UCS, in



JULIAN REYES, PhD, is UCS chief of staff. Before joining UCS, he was a public servant for nine years, most recently as acting branch chief and adaptive management lead at the Bureau of Land Management. He received his BS and PhD in civil engineering from Washington State University.

part because of my background in federal conservation, and in part because of past UCS analysis on how climate change threatens our national parks. As a former federal scientist, I've really appreciated being able to leverage my expertise and my love for public lands in this effort.

Why does UCS pursue litigation against anti-science actions, and how are these cases progressing?

JULIAN REYES: UCS files lawsuits to protect science-based policies from political attacks, and federal scientists' ability to base their decisions on science and share information with the public. Regardless of who's in office, facts and evidence still matter—especially in court. That was made clear earlier this year: We sued the administration for secretly convening a group of climate change skeptics who prepared an inaccurate report in an attempt to undo the EPA's endangerment finding, which a lot of climate policies are based on. A judge agreed that the Trump administration had violated federal law.

Other notable cases UCS has brought are: against the so-called Department of Government Efficiency, for illegal cuts to government staffing and funding; against the EPA for removing crucial information about climate change and environmental justice from its websites and for unlawfully repealing the endangerment finding; and the national parks case. [Editor's note: You can follow the progress of these cases at act.ucs.org/fall26-lawsuits.]

You wrote recently about proposed changes to the US Forest Service, and then found yourself on NPR sparring with Tom Schultz, the agency's chief. How did that happen?

JULIAN REYES: The proposed changes include closing most of the Forest Service's research facilities, relocating its headquarters, and gutting its research and development capacity. Having worked at the Bureau of Land Management in 2024, I observed the agency was still hamstrung by decreased staffing and missing expertise resulting from a similar relocation in 2019, under the first Trump administration. I thought we should speak out. UCS became one of the few organizations making the public aware of what was at stake.

When I was on NPR with Chief Schultz, I made the point that the US Forest Service is the world's largest wildfire research organization. Cutting its research capabilities will yield a significant brain drain and push scientific discovery back decades, which we can't afford as wildfires worsen.

Of course, cuts to federal science aren't only affecting the Forest Service. As a former federal scientist, what's your perspective on the effects of the Trump administration's efforts to slash funding and jobs, muzzle science and scientists, and overturn science-based policies?

JULIAN REYES: A lot of the things that the government does, you don't realize

The claim that companies can do the work of government—I don't buy that. Companies exist to make profits. In the federal government, your job is to help people, not profit. It's a different mission.

what they were doing until it's gone. Think about the federal employees monitoring the flesh-eating screwworm or cyclosporiasis outbreaks, who no longer do this critical work. These are significant losses for people in this country. The claim that companies can do the work of government—I don't buy that. Companies exist to make profits. In the federal government, your job is to help people, not profit. It's a different mission.

For former federal scientists like you who left or were fired from the Trump administration, what's your advice?

JULIAN REYES: First of all, I really appreciate all the civil servants who are still working for the federal government. They're doing their best in a difficult time.

For those who have left or had to leave: I know a lot of you are sad and

enraged, and rightly so. But it's important to remain engaged in your communities. Don't forget that you are valued and needed in society. And if you have any interest in science communication, science policy, engaging with decision-makers and community members, you should join the UCS Science Network (act.ucs.org/fall26-scinet). It's a great way to find resources on how you can extend your impact. [Editor's note: See p. 6 to learn how the Science Network is mobilizing experts for midterm elections.]

Speaking of the UCS Science Network, you were part of it before you ever thought about working for UCS. What did you get from that experience?

JULIAN REYES: I was first introduced to UCS when I was a graduate student. I was interested in science policy and

science communication, and I found the Science Network to be a community of like-minded folks who thought about science not just for science's sake, but to inform action and policymaking. And now, I work for this organization that provided a home for my nascent interests. It's been a dream come true.

How can UCS help reimagine the federal scientific enterprise?

JULIAN REYES: We have the expertise and experience to move the needle on the science-policy interface, scientific integrity, and thinking about the equity and environmental justice considerations embedded in science. This is a time when we can reimagine, and an opportunity to fix things. It's okay to say what's wrong and how to change it. We need to think big. {C}

MAXIMIZE YOUR IMPACT GIVE A GIFT OF STOCK

By gifting stock to UCS, you could earn significant tax savings on capital gains—while standing up for science.

Learn more about this smart way to give today

ucs.org/stockgifts
member@ucs.org
(617) 301-8000



Casa Pueblo Innovates Community Solar

By Michelle Rama-Poccia



A Casa Pueblo initiative, Energy Independence Square (*La Plaza de la Independencia Energética*) is located near the organization's headquarters. The Plaza hosts a microgrid with energy storage, and serves as a community space for education, recreation, research, and culture in Adjuntas, featuring art from local artists.

In a little pink house in a small town called Adjuntas nestled in the mountains of Puerto Rico, Casa Pueblo, a community-led self-sustainability group, has forged a path toward energy independence by creating a solar energy network for its community. And in the process, this small organization has drawn the attention of activists and academic researchers around the world. The Union of Concerned Scientists has been partnering with Casa Pueblo for the past three years to help bring a more equitable and resilient electricity system to Puerto Rico.

For many years, Puerto Rico has had to endure blackout after blackout—a problem that has only worsened since the government contracted with the private consortiums GeneraPR and

LUMA Energy to manage power generation and to handle transmission and distribution, respectively. It's such a serious problem that several short documentaries have been made about LUMA's precarious performance, including *El Apagón—The Blackout*, by the musician Bad Bunny and independent journalist Bianca Graulau.

Meanwhile, Casa Pueblo has long fought to become independent from fossil fuels, both for the ecological well-being of its community and the climate, and for the practical advantages rooftop solar energy and battery storage offer.

Ever since Casa Pueblo's origins, when his parents fought to prevent an open strip-mining plan in 1980, Executive Director Dr. Arturo Massol-Deyá

has sought sustainable solutions to the problems Adjuntas faces as a low-income, remote area of Puerto Rico with little political capital. In 1999, the organization installed its first five solar panels on a pink house to “challenge fossil fuel dependency in Puerto Rico, and we have been promoting energy independence ever since,” Massol-Deyá says.

The island was 99 percent dependent upon fossil fuels at the time, when what made sense for Puerto Rico, Massol-Deyá says, was to embrace and “redefine the sun as our primary energy source.” Casa Pueblo has come a long way since those first five solar panels, now having installed them on more than 400 homes and businesses in Adjuntas and in places as far away as the Dominican Republic.

The organization is funded by donations, many of which come from Puerto Ricans in the diaspora, as well as Casa Pueblo's "Madre Isla" business, which sells locally grown coffee and artisanal goods. Its website, casapueblo.org, invites visitors to "become a co-founder of Casa Pueblo's Living Energy Innovation Laboratory," its plan for an ecosystem of interconnected microgrids where academic and industry researchers can carry out applied research in real-world conditions and where community organizations can learn and directly participate in renewable energy projects. This is what Massol-Deyá believes is the future of energy in Puerto Rico. His hope is to develop technology that allows communication between microgrids—even ones using different technologies—synchronizing them and transferring energy between them as needed.

"THE HURRICANE IS EVERYTHING THAT CAME AFTERWARD"

Even as an early adopter of solar, Adjuntas's resilience was put to the test in September 2017 when Hurricane Maria struck. Areas around the town lost power for about a year, while the town center went without power for more than four months—putting people's lives at risk from lack of access to lifesaving medical devices and refrigeration for medications and food. Communications were cut off from emergency services.

Puerto Rico is no stranger to hurricanes, but when Adjuntas took stock of the damage after the storm, terrible suffering came to light. With Maria, "the hurricane is everything that came afterward," as Massol-Deyá puts it, because of both the federal and territorial governments' failure to respond adequately. In Adjuntas, the

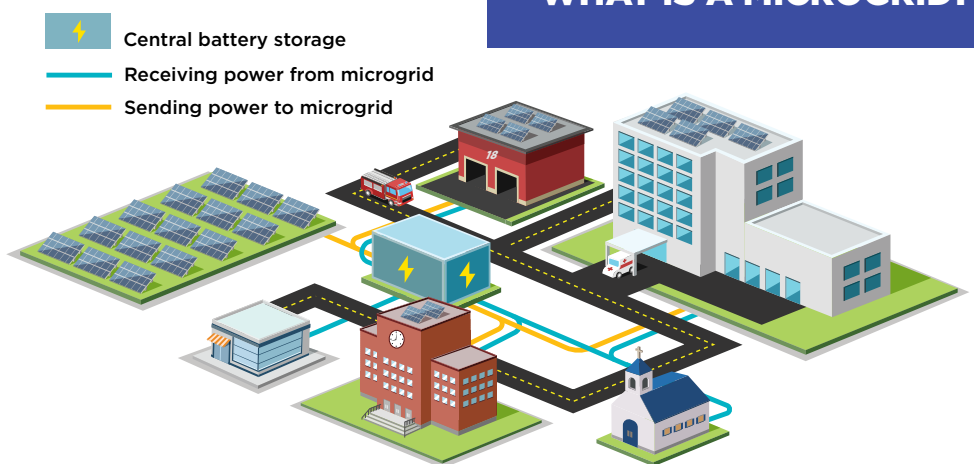
Federal Emergency Management Agency never arrived with tarps to cover homes that had lost roofs. "That's when you see the government's inability to provide the most basic services, and the anxiety caused by the lack of communication," Massol-Deyá says.

Thanks to its solar panels and batteries, Casa Pueblo helped fill the void left by the government and became an essential resource for community resilience and well-being. People went to the pink house to charge their phones and store insulin and food, because the solar-powered house still had power. Casa Pueblo's radio station kept broadcasting because it was connected to the solar photovoltaic system, providing information and relaying messages to and from community members in Adjuntas and throughout the Puerto Rican diaspora, letting family members know they were safe.

AFTER A CRISIS, SOLAR PROVED ITSELF

After years of community outreach educating people about the benefits and uses of solar power, Casa Pueblo found there was no longer any need to talk up solar after Hurricane Maria. "People saw that Casa Pueblo had power," says Massol-Deyá. "People started to show up at Casa Pueblo to plug in respiratory machines and recharge their personal equipment, and people were living [with] energy freedom. I think there was a huge switch."

So when Casa Pueblo approached businesses like El Colmado Alto de Cuba, a local grocery store, to offer solar panel and battery storage installation, the reception was positive. Casa Pueblo's goal was to keep grocery stores and other essential businesses operating and providing services to the community by reducing their costly electricity bills



Microgrids are an important tool in energy sovereignty. By installing rooftop solar and batteries on municipal buildings like hospitals, fire stations, and schools, neighborhoods can keep critical infrastructure running during blackouts.

and eliminating skyrocketing fossil fuel expenses to run generators during the town's many blackouts.

Sharon Cedeño, who owns and operates the store, saw her LUMA electricity bill that had run about \$600 a month vanish into a credit of \$50 or \$60 a month.

"UCS is proud to partner with organizations such as Casa Pueblo because they are demonstrating that energy generation models that prioritize the well-being and needs of communities are possible," says Dr. Juan Declet-Barreto, bilingual senior scientist with the UCS Climate Program. "Casa Pueblo's model solves multiple problems: reducing the dependence on fossil fuels and the price fluctuations and

carbon emissions that come along with them, and eliminating electricity delivery problems associated with the frail transmission infrastructure in Puerto Rico by moving the electricity generation to where it's needed."

SCIENCE + COMMUNITY + CULTURE = SOCIAL TRANSFORMATION

Casa Pueblo attributes its success to advocacy that involves "action and merging science, culture, and community for social transformation."

But what does that mean exactly? From its early days, when its first rally attracted just one person, to fighting—and winning—long battles against powerful

interests looking to exploit Puerto Rico's resources, Casa Pueblo has learned that teaching science isn't enough.

"You can have the greatest knowledge about global warming, and nothing is going to happen unless that knowledge is embraced within your own culture to build community," Massol-Deyá explains. "We said, 'Well, learning about the protection of the land is good, but within our culture we have a deeper connection to nature that is as important or more to build community.'" Engaging people with a more participatory, democratic approach is the way Casa Pueblo has addressed new challenges ever since.

To learn more about Casa Pueblo's inspiring example, watch our video at act.ucs.org/fall26-casa-pueblo and listen to our Spanish-language podcast at act.ucs.org/fall26-podcast. {C}

Michelle Rama-Poccia is a senior bilingual writer and podcast host at UCS.

THE RESILIENCY OF SOLAR BECAME CLEAR TO THE COMMUNITY AFTER HURRICANE MARIA: CASA PUEBLO HAD POWER, GIVING PEOPLE ENERGY FREEDOM.

Big Oil Looks for a Free Pass

(continued from p. 11)

LOBBYING FOR A LIABILITY SHIELD

A hallmark of a functioning democratic order is accountability for one's actions. If you lie, and especially if your lie causes irreversible harm, there are consequences. You make a mess, you clean it up.

Well, unless you can convince a majority of Congress to give you a free pass. This strategy comes directly out of the playbook of the gun industry, which is protected from civil liability by the Protection of Lawful Commerce in Arms Act signed by President George W. Bush in 2005. Not a single negligence case has gone to trial since.

That is the new escape hatch the fossil fuel industry is seeking. A handful of states, including Louisiana and Utah, have passed legislation granting sweeping legal immunity to corporations and individuals for climate-related harms caused by heat-trapping emissions. The bills are part of an orchestrated national push by the American Petroleum Institute to undermine both climate lawsuits and popular "polluter pays" legislation passed in other states. Now, legislators in the US House and Senate have intro-

duced legislation that would do the same—while also attempting to legislate away the field of attribution science.

"From statehouses to Washington, DC, these immunity laws threaten to entrench a costly and precarious fossil fuel-dependent future for the profits of a select polluting few," says Dr. Delta Merner, lead scientist for the UCS Fossil Fuel Accountability Program. "There is still time to ensure that industry doesn't gain immunity at a federal level. Congress must stand strong against a federal immunity shield for Big Oil."

UCS supporters agree: More than 35,000 have already written to their members of Congress to demand that they reject efforts to shield the fossil fuel industry from the consequences of its actions. You can join them today by visiting act.ucs.org/fall26-oil-action.

The end goal of Big Oil's actions is not just maximizing profits, but also leaving taxpayers on the hook to deal with the climate impacts of its products. There is no greater bailout to the industry than *not* having to cover the costs of the damages it has caused. {C}

Eric Schulz is a strategic communications officer at UCS.

Lights, Camera . . . Science!



Earlier this year, Dr. Miriam Nielsen sat down at her desk, turned on her camera, and recorded a video she titled “Hello, I am a concerned scientist.” In the video, Nielsen, a climate scientist with 40,000 followers on YouTube, advocates for the importance of science-based public policy and shares screen time with Union of Concerned Scientists staff as they describe their work and research.

Once it was online, that video—part of a fundraising effort she’s been involved

with for years—convinced thousands of viewers to nominate UCS for a generous grant from an annual pool of funds.

“What I admire about UCS is that your scientists do the work *and* show people why it’s important,” says Nielsen. “There are not a lot of places where a donation can both support science and support using that science for actionable outcomes.”

Nielsen especially appreciates UCS efforts to push back against cuts to scientific research. She says, “Even the most basic climate science has practical applications that help people. This beautiful enterprise, where everyone participates and then gets access to information on the other end, is so important.”

In her videos, Nielsen is sincere, compelling, and convincing, none of which is easy to achieve on camera. She cultivated these skills studying film and environmental science, working in broadcast journalism, and then pursuing a master’s degree in climate science and policy. While in that program, she says she caught a bug for research and

earned a PhD in earth and environmental sciences from Columbia University. She’s worked since then as a postdoctoral research scientist with the institution’s Lamont-Doherty Earth Observatory, studying climate impacts.

Nielsen says her background in communication gives her a different perspective as a scientist. “My impulse is to communicate what I’ve learned. It’s another thing I like about UCS: You value the more traditional academic output like publishing articles in scientific journals, but also talking to a lay audience. I think in the academic space that’s often viewed as a distraction. But we’re living in a rapidly changing climate. People need to know about it.”

Her advice for any scientists who want to sharpen their communication skills is simple: Take an improv class. “A scientist already knows all the stuff they need to know—it’s just figuring out how to reinterpret it for other people,” she says. “But being on camera and talking to people can feel weird. You need to loosen up and be flexible.” {C}

AN INVESTMENT IN SCIENCE. AN INCOME FOR LIFE.

If you’re age 60 or older, you can support our work, receive significant tax benefits, and enjoy income for life by establishing a charitable gift annuity with UCS.

Contact our Planned Giving Team

ucs.org/cga

(617) 301-8095

plannedgiving@ucs.org

Use our online gift calculator
to estimate your benefits

ucs.org/cga



Colorado Shows the Rest of the Country How to Handle EV Batteries

By Dr. Jessica Dunn



One of the stickier subjects when it comes to electric vehicles (EVs) has been what to do with a vehicle's battery when it reaches the end of its usefulness, because EV batteries are large,

heavy, and contain hazardous materials. This past June, the Union of Concerned Scientists celebrated a milestone achievement in managing this challenge: the signing of a Colorado bill into law that takes several first-of-its-kind steps forward on the reuse, repurposing, and recycling of EV batteries.

First, and most importantly, the new law requires that all EV and hybrid batteries be recycled. If the businesses that would typically end up with the battery at the end of its life—auto dismantlers, scrap yards, or mechanics—don't want it, the automaker is required to collect it. Furthermore, recyclers are required to recover the cobalt, lithium, and nickel in used batteries at rates that prevent smelting, an inefficient and highly polluting process.

The law also includes several measures for ensuring the effectiveness of the recycling program. For example, battery health data must be made accessible to third parties while the battery is still in the vehicle, making it easier to determine whether the battery is a candidate for reuse or repurposing. New labeling requirements will help ensure proper recycling, and the state is now required to conduct surveys of how the program is working and to identify where it could be improved.



A Volkswagen engineer disassembles used EV batteries for material recovery.

Finally, the law guarantees accountability by requiring automakers to report their battery collection and recycling data to state regulators. It even covers these officials' costs—saving taxpayer dollars.

One of the biggest wins for people concerned about the future of clean transportation is the idea of “extended producer responsibility”: that is, ensuring that a single entity—in this case, the automaker—is ultimately responsible for recycling an unwanted battery. The law is a win for automakers too, by helping them recover valuable minerals at the highest rate possible.

WHO WILL TAKE UP THE BATON?

UCS worked together with partners for months prior to the bill's passage to educate Colorado lawmakers about the benefits of these policies. We provided analysis showing that if the United States adopted EV battery recycling and a complementary set of strategies, the country could meet about half of its demand for the lithium needed in EV batteries with domestic recycled lithium

by 2050. That would mean less mining, less toxic emissions, safer communities, and more domestic jobs.

Now that Colorado has acted, we look to other states to follow its lead. California, for one, is the biggest market for EVs in the United States, and has already adopted extended producer responsibility as its preferred approach to overseeing multiple industries. Applying Colorado's example to California's electric and hybrid vehicles would be conceptually straightforward and would pay big dividends.

By setting clear mineral recovery rates and prioritizing reuse and repurposing, we can preserve the functional value of battery components for as long as possible and reduce the need for new extraction. This is exactly the kind of science-informed approach the United States needs to ensure EVs deliver their full economic, climate, and sustainability potential. {C}

Jessica Dunn, PhD, is a scientist in the UCS Clean Transportation Program. Read more from Jessica on our blog, *The Equation*, at blog.ucs.org.

SCIENCE NEEDS CHAMPIONS IN EVERY GENERATION

Include a gift to UCS in your will or other estate plan.

UCS can be named as a beneficiary in your will or trust, retirement plan, life insurance policy, donor advised fund, or other financial account.

Contact our Planned Giving Team

plannedgiving@ucs.org

(617) 301-8095

Tax ID: 04-2535767

Start building your legacy today

ucs.org/legacy

Tax ID: 04-2535767

[Union of Concerned Scientists

Two Brattle Square
Cambridge, MA 02138-3780

NONPROFIT
ORGANIZATION
US POSTAGE
PAID
UNION OF
CONCERNED
SCIENTISTS

TAKE A STAND FOR SCIENCE

Give a tax-deductible
gift today for a strong
finish to 2026.

MAKE A GIFT OF STOCK

ucs.org/stockgifts

BECOME A PARTNER FOR THE EARTH WITH A MONTHLY GIFT

ucs.org/monthly

DONATE THROUGH YOUR IRA

ucs.org/ira

GIVE THROUGH A DONOR ADVISED FUND

ucs.org/daf

JOIN OUR 2X TOGETHER FOR SCIENCE MATCH

ucs.org/2026match

Deadline: December 31

QUESTIONS?

member@ucs.org

(800) 666-8276

