

SOLUTIONS



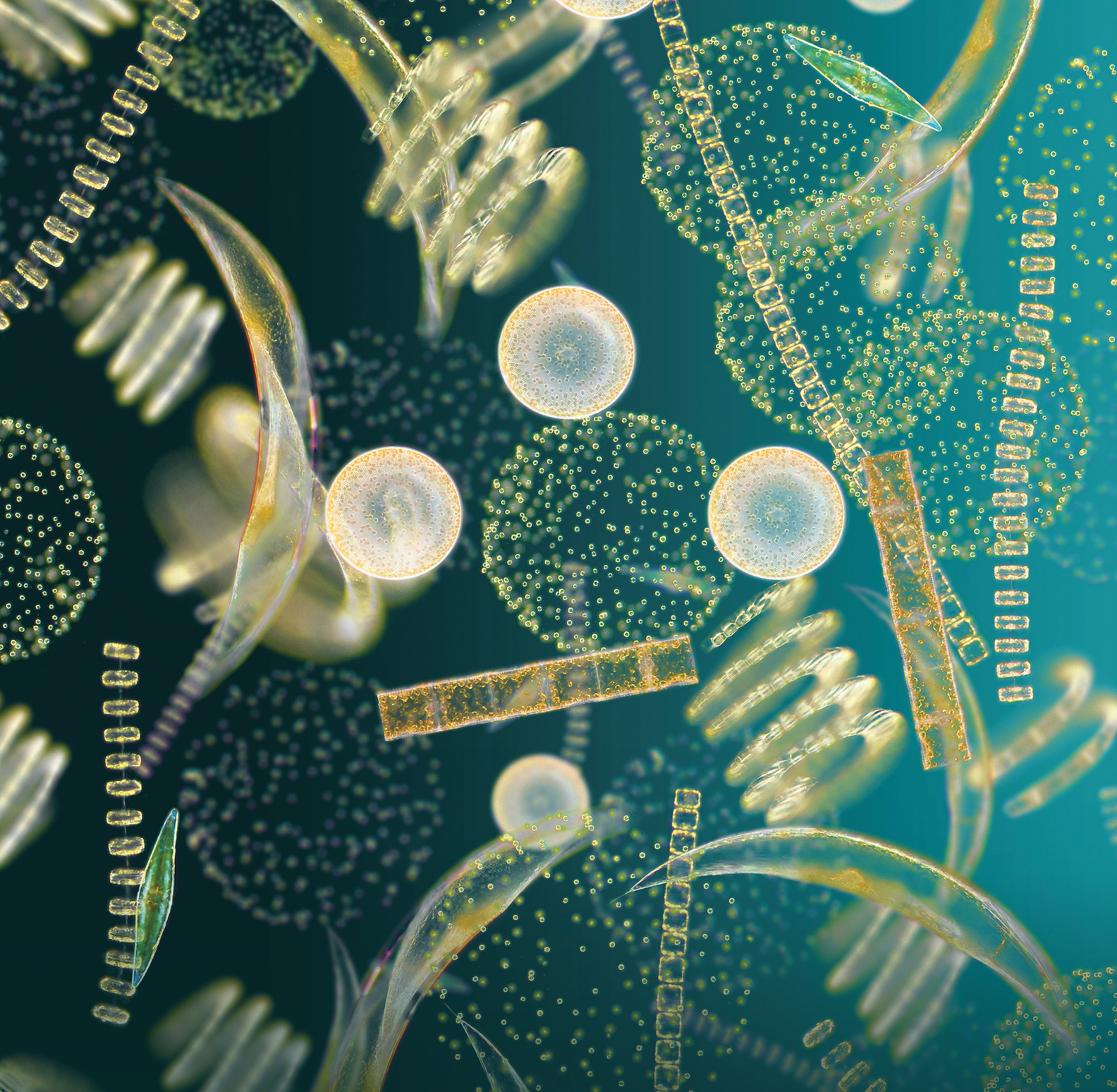
Vol. 57, No. 4 / Fall 2026

WHEN WE PROTECT FORESTS BENEFITS FLOW

**New financing for forest conservation
helps communities and nature
succeed together.**



ALSO INSIDE: Ohio mom takes on air toxics | Valuing wetlands | Cities promote clean air



The tiny ocean allies fighting climate change

Invisible to the naked eye, tiny ocean phytoplankton help regulate Earth's climate on a planetary scale. Like floating forests, these microscopic organisms absorb carbon dioxide through photosynthesis. Some of that carbon eventually reaches the deep ocean, transported by sinking phytoplankton and marine animals that feed near the surface and descend into deeper waters. There it can remain stored for decades to centuries. As the search for climate solutions intensifies, EDF has launched a new Phytoplankton Carbon Solutions research program to explore whether this natural process can be safely enhanced to help remove more carbon from the atmosphere.

An electric opportunity



MOHAMMAD SHAHHOSSEINI

The summer of 2026 brought dangerous heat and record-high electric bills. Electricity prices in the United States reached an all-time high in June. Over the next four years, electricity costs are expected to further increase by as much as 40%. That's due in large part to increasing demand from data centers and the need to upgrade our electric system to adapt to climate change-fueled extreme weather, like wildfires, hurricanes and heat waves.

Americans are concerned about affordability, with gasoline and electricity prices near the top of their lists. The good news is: The cost of clean energy

has plummeted. It is also the fastest and least expensive way to meet rising demand. That is why, for the first time in a long while, I can feel the wind at our backs.

But there's a major obstacle to building clean energy projects. And it's not just attacks that EDF and our allies are helping to fend off at the state level and in federal courts. (*See p. 11 and p. 4.*)

Archaic government rules, many of them holdovers from the 1950s, prevent the market from moving to the lowest-cost options. These rules have been an afterthought. Almost the only people paying attention to them in recent decades have been utilities, which have a vested interest in certain outcomes, with any proposed modernizations mostly stalling in backrooms outside of public view.

Now, people are paying attention to rules that are widely seen as outdated and inefficient, increasing costs for consumers and businesses alike. That means we have numerous opportunities to reform our electric system in ways that both protect consumers and advance clean energy.

I'm encouraged by progress in the western United States, where EDF helped California pass legislation that opened the door to a long-sought solution: a unified electricity market spanning the American West. (*See p. 6.*) As a result, power authorities covering most of California and parts of Oregon and Washington have already opted into a market that could eventually save consumers up to \$1.2 billion annually and cut climate pollution by 39%. And this summer, thanks in part to workshops and outreach conducted by EDF and partners, a bipartisan group of 11 Western governors agreed to collaborate on improving electricity transmission infrastructure — the wires that move electricity from where it's produced to where it's needed. Much more work needs to be done, but this is an encouraging start.

Both political parties want electricity reform and that creates a powerful opportunity: A cleaner, more affordable, more reliable electric system is within our grasp.

Your support enables us to pursue and promote this opportunity at every turn.

A handwritten signature in black ink that reads "Fred Krupp".

Fred Krupp, EDF President

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On the cover: A toddler's feet peek out from behind her mother at a new well in Ghana's Sefwi Wiawso district. (Forestry Commission of Ghana/Climate Change Unit)

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Letting nature do the work

Florida has long been on the frontlines of a changing climate. Now, in a rare unanimous vote for environmental progress, Sunshine State lawmakers have enacted legislation that could make communities more resilient while supporting more mangroves, more coral reefs and more of the natural beauty that underlies much of the state's economy.

The law directs the state Department of Environmental Protection to develop a clear permitting process for nature-based projects that help protect against climate-change-related flooding. It cuts through the red tape that made it easier and quicker to build concrete seawalls than restore mangrove forests and other natural systems.

Over the last decade, Florida has experienced more than \$270 billion in damages from hurricanes, tropical storms and flash floods — extreme weather events expected to intensify with climate change.

Nature-based solutions, like mangroves, seagrasses, dunes, wetlands and reefs help stabilize beaches, reduce erosion and, during storms, absorb waves' destructive energy. During Hurricane Irma in 2017, for instance, mangroves prevented an estimated \$1.5 billion in flood damages.

EDF has long advocated such solutions in Florida, working for three years to get this landmark law across the finish line through public education campaigns, policy guidance and outreach to lawmakers.

"Getting unanimous support for anything might feel like a pipe dream these days," says EDF's Florida Director Dawn Shirreffs. "But when you can focus on our shared values, like a desire to protect the places we call home, we can still drive real and lasting change."



Wind power wins

The Trump administration's war on wind is stalling. In June, the administration abandoned one of its initial efforts to block wind energy — a Day 1 presidential order that suspended approvals for any new wind power projects nationwide. Seventeen states and Washington, D.C., supported by EDF and others, contested the order in court and won in December 2025, but the administration appealed. Now, the U.S. Department of Justice has dropped its appeal. Federal judges have also blocked multiple efforts by the Trump administration to stop other wind projects already in the pipeline and rejected a federal attempt to undermine tax incentives and clean energy projects.

"These efforts to block wind energy are not just unlawful — they're obstructing clean, affordable power and good local jobs," says EDF's lead U.S. clean energy attorney Ted Kelly.

Despite the string of losses, the administration's attacks continue, including deals to pay developers to NOT build wind farms — payments that, at press time, have cost taxpayers almost \$4 billion. The impact of the buyouts will play out over the next several years. Meanwhile, wind, solar and batteries remain the cheapest sources of new electricity, and EDF research shows that a record 79.7 gigawatts of wind power — the equivalent of 38 Hoover Dams — are set to come online in 2026.



Duke fans bleed blue, live green.

Channeling fan fervor

EDF has teamed up with the Green Sports Alliance to publish the *Fan Engagement Playbook*. With good reason: When teams, athletes and stadiums promote clean energy, composting and more, they can enlist millions of fans in efforts to protect people and the planet. "Every game, every athlete and every venue presents an opportunity to turn shared passion into meaningful progress," says EDF's Asia Guest, who served as a playbook adviser.



Ireland's greener pastures

An EDF collaboration is testing a new way to reduce climate pollution from dairy farms.

IN THE VERDANT, SOUTHWEST CORNER of Ireland, dairy farmer Kerry Desmond is trying something new with his cows. Or not with his cows exactly, but with their manure. "It's definitely really important nowadays to be aware of the environmental impact of everything that we're doing," he says.

Manure can contaminate water for drinking, wildlife and recreation. It also generates climate-polluting methane gas. EDF has been working to reduce this fast-acting, potent climate pollutant from sources around the world, including from the dairy industry — a leading source. With partners ranging from small farmers to some of the world's largest dairy companies, EDF is advancing methane reduction strategies that don't just reduce pollution — they also improve farmers' bottom lines.

Here in County Cork, with Desmond and other farmers from the Carbery dairy cooperative, and partners like the Irish government, EDF is testing a new way to prevent the creation of methane from stored manure. This method could serve as a model throughout Europe and anywhere manure slurry is stored.

Beyond cow burps

As many a late-night TV host or fifth grader will tell you, cow burps release a lot of methane. But manure stored on farms is another important source. Even though most of Ireland's 1.5 million cows, like Desmond's, spend their days grazing in idyllic green pastures, they still linger in barns for shelter and during milking. Their waste collects and must be stored, typically as a diluted slurry, in tanks, man-made lagoons and pits. Much of the slurry will eventually be used as fertilizer. But before that, it's often stored for months at a time, to accommodate local weather conditions and environmental standards designed to protect waterways.

Livestock manure is responsible for almost 13% of Ireland's methane pollution. Its government is supporting efforts to reduce that, to help the country meet its own greenhouse gas reduction targets as well as those of the European Union. Reducing methane from farms can also

GlasPort Bio, the European think/do tank Climate KIC, and dozens of farmers like Desmond are testing a methane-reduction system that works by infusing additives into slurry, which inhibits the creation and leaking of methane. The additives also keep nutrients within the manure, making



Kerry Desmond is among dozens of Irish farmers testing new technology to cut methane pollution.

WOMBAT MEDIA

give Irish cheese and butter — already highly coveted — additional market power and encourage other dairy companies to up their emissions reductions efforts.

"The opportunity here is potent," says Justin Zahra, who leads EDF's agricultural program in Europe and is a member of the project's steering group, "because the Irish dairy sector, which exports to 140 countries, is quite ambitious in terms of its sustainability and markets itself that way throughout the world."

On-the-ground testing

In a pilot project, EDF, Irish biotech firm



WATCH *Stewarding the Land: An Irish Farmer's Story.* It features Kerry Desmond and his work to reduce methane on his farm.

the slurry a more effective fertilizer when farmers use it on their fields later on.

"It actually helps farmers reduce the amount of synthetic fertilizers that they need," says Zahra, "which means they use fewer fossil fuels and save money, too." The pilot is testing whether the emissions reductions GlasPort Bio found in the lab bear out in the real world. Precise, ground-tested data can help inform climate-smart agricultural policies that support farmers in their efforts to be better stewards of their land and livestock.

That's something that appeals to Desmond, both as a farmer and as a father of a baby boy. "You want in a couple of years to be able to let him see how much you love the land, love the biodiversity, and you want to pass that love on to him as well."

Liz Galst



Ireland's dairy industry contributes more than \$20 billion to the country's economy.

WOMBAT MEDIA

Keeping electricity prices down in the US West

A new, behind-the-scenes power market will save consumers money and cut pollution.

ACROSS THE COUNTRY, ELECTRICITY prices are skyrocketing, up 13% in 2025 alone. But in the 11 states that make up the American West, bills are projected to go down, thanks to a new initiative EDF has championed that launched last spring.

How is it possible to tamp down prices? Especially since electric demand in the West is projected to grow by 30% over the next decade and the Trump administration is working to block wind and solar energy projects — two of the cheapest, fastest ways to get more electricity online?

The answer is a smart, economics-driven solution called a “day-ahead” market. It works by allowing the electric system to make better use of the region’s abundant clean energy resources and is projected to lower consumers’ costs by as much as \$1.2 billion a year. It could also reduce as much climate pollution each year as 630,000 cars produce annually.

How the Western electric grid works

The 11 states west of the Rockies are physically connected in one big grid that’s controlled by a patchwork of 38 organizations called “balancing authorities.” In real time, they buy electricity from different producers — gas or coal-fired power plants, wind and solar farms, or battery storage facilities — aiming to purchase

the right amount of power to keep electricity flowing.

But because fossil fuel power plants take many hours to ramp their production up and down, affordable clean energy has sometimes been left waiting in the wings as more expensive fossil fuel electricity continues to course through the grid. This inefficient system wastes enough clean electricity in a year to power the city of San Francisco for two. “A real-time market doesn’t give a balancing authority enough of a runway to say, ‘Tomorrow’s going to be really sunny. We can turn down our gas-fired generator and buy cheap solar instead,’” explains Michael Colvin, who heads EDF’s California energy policy advocacy.

\$1.2 billion

The amount of money the Western day-ahead market can save consumers.

Source: California Independent System Operator

A day-ahead market enables balancing authorities to take a bigger-picture look at the whole Western region and plan ahead, both in the short term and the long term. Over the past decade, EDF has helped develop and promote legislation that would make the day-ahead

market possible and worked with power companies, regulators and partners to build support.

Bigger market, bigger benefits

Now that this new market has opened, things are starting to change.

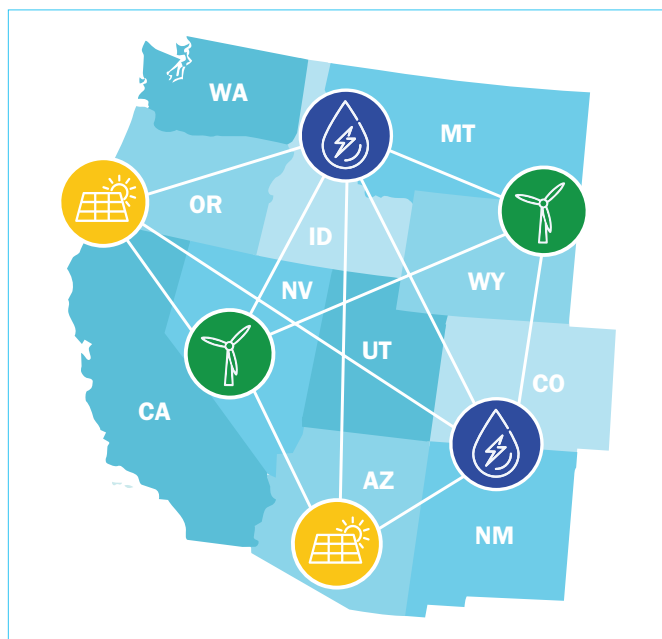
Nine of the 38 authorities, including one that covers the majority of California, have already signed up. With a bigger market, the benefits are expected to increase for consumers.

When balancing authorities work together, they can also more cost-effectively plan and build transmission infrastructure that can move the most affordable, cleanest energy from where it’s cheapest to produce to where it’s needed most. A new, EDF-supported agreement signed by Western state governors can help speed that process, too.

All of which means the West will need to build fewer power plants overall, which will again save consumers money and reduce pollution — all of it with no change in service for consumers.

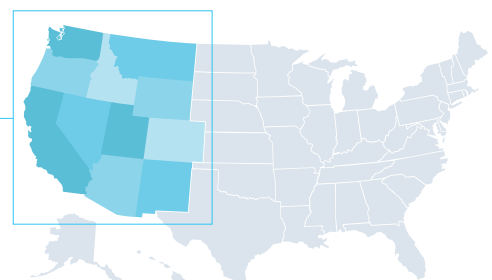
“You’ll still be able to charge your iPhone whenever you want to charge it,” Colvin explains. “The difference,” he says, “is that the financial savings that come with this market is really money back in your pocket.”

Liz Galst



THE WEST-WIDE GRID

When electricity authorities across the Western U.S. work together, they can make better use of cheap, abundant clean energy and lower costs for consumers.



The cost of losing wetlands

A new EDF study reveals the value of wetlands for flood insurance.

WETLANDS ARE SOME OF EARTH'S most vital ecosystems — not only for the wildlife habitat they provide, but for the way they protect people, too.

“Wetlands act like natural sponges during heavy rain, storing floodwater and slowing runoff before it moves downstream,” says Adam Gold, EDF’s senior manager of coasts and watersheds science. “Yet wetlands continue to disappear, in part because the value of the services they provide is often overlooked.”

Calculating their value is more important than ever as the Trump administration works to strip federal protection from wetlands across the country. New research by Gold and colleagues shows that the administration’s proposal to weaken wetland safeguards could jeopardize roughly \$177 billion in flood protection for people who live downstream. This is happening as climate change makes bursts of extreme rainfall more common, leaving communities in need of more flood protection, not less.

Though wetlands can provide that protection, they’ve been disappearing for centuries. Since 1700, what is now the United States has lost over 40% of its wetlands, as these boggy ecosystems have been drained or filled in for housing, agriculture and parking lots.

In recent years, the loss of wetlands has been compounded by more frequent, devastating flooding.

Nicholas Zuba recalls watching out his window in Mamaroneck, New York, in



Wetlands serve as vital buffers against flooding.

2021, as floodwaters from Hurricane Ida turned the town’s main street into an extension of the Mamaroneck River.

“I was scared for my safety and grieving for my community,” says Zuba, who lost his car but still considers himself lucky. Fifty-two people across the Northeast lost their lives that day.

The material losses are also a drain on survivors — and on taxpayers. In their study, Gold and his coauthors examined the impacts of losing wetlands near rivers on insurance claims covered by the federally backed National Flood Insurance Program. This kind of wetlands loss, they found, has increased residential flood insurance payouts by over \$10 billion since 1985 — an extra \$5,000 per claim.

But because the NFIP insures only about 30% of annual flood losses, the total costs of wetland loss nationwide over the last four decades might be closer to \$33 billion, the researchers say. And if the Trump EPA’s proposal to redefine which wetlands qualify for federal protection goes through — leaving 91% of all wetlands in the contiguous U.S. more vulnerable to development, according to an EDF analysis — households and insurers could be on the hook for billions of dollars in additional claims.

Putting a hard number on the cost of wetland loss, says Gold, helps make the case for protecting wetlands, even among lawmakers and industries where alignment with environmental groups is rare.

In Florida, EDF recently helped pass

legislation that prioritizes natural infrastructure like wetlands to protect coastlines. (See p. 4.) In North Carolina, we’ve helped secure state funding to protect and restore natural wetlands and floodplains. And in the Mississippi River Basin, we’ve supported a bipartisan coalition of legislators across 10 states in their efforts to make wetlands and other natural systems a part of flood preparedness.

“Wetlands continue to disappear, in part because the value of the services they provide is often overlooked.”

— Adam Gold, EDF coasts and wetlands science manager

EDF’s research could help the NFIP value wetlands in its calculations. A locality that preserves its wetlands, for example, could see reduced premiums. Evidence of wetlands’ economic value could also help steer government policy reforms to better protect communities.

“Wetlands are not just open space waiting to be developed,” says Gold. “They are part of the infrastructure that helps reduce flood damage. And when they disappear, households and communities bear the burden — and the costs — every time a storm hits.”

Joanna Foster



Nicholas Zuba surveys storm damage.

GREGKESLER.COM

In Ghana's cocoa belt and beyond, forest-finance programs are converting emissions cuts into tangible benefits for local people.

THE FOREST DIVIDEND

By Tom Clynes

IN THE WEST AFRICAN VILLAGE OF AWISA, GHANA, footpaths of red earth wind from small houses to a shallow, muddy hole in the ground. “Until recently, our animals and us were drinking from this same water source,” says resident Aishetu Ibrahim. “After washing in it, we would fetch it in buckets to our homes.”

The degraded water source was one symptom of a larger ecological decline. Years of clearing for farms and firewood had stripped the surrounding tropical forest, leaving soils exposed, streams choked and cocoa trees struggling. A decade ago, the village began to reverse course. It's now protecting forest trees and planting shade trees with support from Ghana's Cocoa Forest REDD+ program, part of a U.N.-backed initiative to reduce emissions from deforestation and forest degradation. As the forest returned, the land began to recover — holding water, cooling crops and pulling carbon dioxide from the air.

Rebuilding a damaged ecosystem is slow work, and climate rescue slower still. But villages like Awisa are beginning to see tangible returns. Forests store vast amounts of carbon in trees, vegetation and soils. When countries reduce deforestation and restore

Cacao beans drying in Kwabeng, Ghana.

degraded land, they can earn payments from governments and companies — often in wealthier countries — that fund verified emissions reductions as part of their climate commitments.

The payments are tied to results, not promises. The more forest a country keeps standing and the more damaged land it brings back, the more carbon stays out of the atmosphere — and the more funding it can earn. EDF has spent decades helping governments, Indigenous peoples and local communities build systems that ensure those benefits reach the people whose stewardship is critical to protecting the tropical forests that help stabilize the global climate.

In Awisa, residents used part of those proceeds to drill a deep well and install a hand pump. Now, at dawn and dusk, residents line up with bright containers and the steady clank of the handle fills the air. Farmers can irrigate seedlings to diversify their crops and waterborne illnesses have declined.

“Now that we have water, everything is smoother for us,” Ibrahim says.

From a distance, forest-finance programs such as REDD+ can look like a thicket of complex standards and tortured acronyms. On the ground, they can look like clean water in Ghana, more productive

farms in Vietnam and solar mini-grids lighting schools and clinics in Guyana.

Under REDD+, major forest-finance programs are now delivering results for communities on the front lines of forest protection. The mechanics of these programs differ. But the premise is the same: Countries that can prove they are keeping forests standing should and can earn money for proving they reduced deforestation and kept more carbon locked away in forest landscapes.

The service forest communities like Awisa provide is essential. “There’s no way to stabilize the climate without protecting tropical forests,” says Santiago García, who directs forest partnerships at EDF. “And there’s no way to do that effectively without partnering with the people who live in them and making sure they benefit materially.”



GETTY

Ghana shows how that principle plays out. As of 2024, the country had received and distributed more than \$20 million through the World Bank’s Forest Carbon Partnership Facility, which pays countries for verified reductions in emissions from deforestation. Sixty-nine percent flowed directly to farmers and communities; program costs and payments to the Ghana government made up the rest. That money returns to the landscapes that produced it — helping farmers raise yields on existing land, plant shade trees and invest in priorities they choose, such as access to clean water.

Recently, EDF’s forests team helped Ghana clear a critical hurdle between years of conservation work and access to new climate funding.

“There’s no way to stabilize the climate without protecting tropical forests ... without partnering with the people who live in them ...”

— Santiago García, EDF forest partnerships director

Through its Jurisdictional Technical Assistance Partnership, which helps countries access forest-climate funding, EDF paid for the independent audits needed to verify Ghana’s emissions reductions and helped the country initiate the required review process. That work helped Ghana move closer to receiving payments through the LEAF Coalition, a public-private initiative co-founded by EDF that rewards countries for verified reductions in deforestation while supporting forest-dependent communities.

Incentives for forest conservation

Modern forest-finance programs do not ask people to accept poverty as the price of conservation. They tie forest protection to improvements in daily life, especially for women and children, who often bear the burden of fetching water and the consequences of poor maternal care.

Roselyn Adjei, an EDF consultant who directed REDD+ programs for Ghana’s Forestry Commission, recalls accompanying foreign officials to a cocoa-growing ▶



These Ghanaian villagers used forest funding for a clean-water system.

FORESTRY COMMISSION OF GHANA

FORESTRY COMMISSION OF GHANA



Forest conservation funded desks for schools.

village. One visitor questioned the use of conservation funds to drill and install new wells. Residents led them to their old water source. The answer was in the mud.

“If we don’t have good health, how do you think we’re going to care about the forest?” Adjei recalls the villagers saying.

That same understanding is shaping forest finance elsewhere. In the South American country of Guyana, more than 240 Indigenous villages and communities are part of a national benefit-sharing system funded by forest-carbon revenues.

Guyana’s Low Carbon Development Strategy is a national plan to turn the value of standing forests into cash for development without clearing the forest itself. Revenue from international forest-finance programs has already helped support more than 1,300 village-led projects. In a country where about 85% of the land is still forested, Guyana has kept more than 99.5% of that forest standing and has begun earning carbon revenue for doing so.

In northern Guyana, the small Indigenous village of Sebai used forest-protection funds to help fund solar mini-grids that now power schools, health centers and village offices. In Great Falls, carbon-credit revenue went into investments in sustainable logging, furniture-making and production of crops that supply the local school kitchen. Other Guyanese communities have used the money to support low-impact tourism, upgrade sustainable forestry capabilities and strengthen village agriculture.

García’s team at EDF is working in countries including Brazil, Mexico, Vietnam and Ecuador to help shape a new

generation of forest-finance programs — programs designed not only to protect forests, but to deliver lasting benefits for the people who depend on them. The effort builds on EDF’s long-term work to strengthen tropical forest conservation by ensuring that climate solutions are environmentally effective, socially equitable and backed by credible, verified evidence.

Who benefits?

Beyond the carbon accounting lie harder questions: Who gets heard in the decision-making process? And who benefits when forest protection succeeds? To prepare for the arrival of forest-finance revenues, EDF has helped governments, Indigenous peoples and local communities develop the systems needed to answer those questions before money begins to flow.

In Ecuador, for example, EDF and local partners are working with Indigenous and Afro-descendant groups to build a benefit-sharing framework that ensures communities most closely tied to the forest are consulted and receive a fair share of future revenues.

The process is already revealing what those communities value most: education, clean water systems, conservation investments and other projects that strengthen communities.

Similar work in Costa Rica has helped shape benefit-sharing plans for one of the world’s longest-running forest conservation

programs, a model that has inspired efforts across Latin America. Together, these initiatives reflect a lesson EDF has learned through its long history of forest conservation work: Lasting climate solutions depend on giving local people a meaningful voice in how forests are protected and how benefits are shared.

A movement gaining ground

Much more remains to be done, especially in Africa, which lost about 9.6 million acres of forest per year — forests about one-quarter the size of Florida — between 2010 and 2020, according to the UN’s Food and Agriculture Organization.

In Ghana’s cocoa belt, the benefits of keeping forests standing are visible in practical ways. In Assin Nuanua village, a new maternity ward built with forest payments now serves 20 to 30 patients a month. “It is making our job easier and making deliveries safer,” says health worker Dorcas Quayeson.

At Betenase Technical School, student AJ Amaro remembers the long daily walk to streams to fetch water before school. “It was difficult for us to get to our classrooms on time,” she says. The new well has given students hours back to focus on their studies. By easing the daily burden carried by rural residents, conservation feels less like an external demand and more like a shared investment.

“The protection of forests is what built this school, this borehole, this maternity ward,” says Adjei. “People see that cause and effect, and now they are pushing to do more: plant more forests, protect the ones they have. The momentum is clearly building.” ■



Ghana’s cocoa belt is one area benefiting from forest finance.

ALAMY



Arizona repels attacks on clean energy

GETTY

IN THE SUMMER, FUNDA LYON YUKSEK has to run two central air conditioning units just to keep her house in the Phoenix area livable.

“When it is 110 degrees outside, it’s not optional. This isn’t luxury,” explains Yuksek, a home decor content creator and mother of four.

But the price tag associated with that energy use certainly feels like an extravagance. The average household in Arizona pays around \$250 a month in the summer for the privilege of keeping their living space at a safe temperature. To make matters worse, Arizona’s two biggest electric utilities recently proposed a 14% rate hike for residential customers.

Arizona has the most sun of any state in the country, and solar power could help keep bills in check — wind and solar energy are the cheapest, fastest ways to get new electricity onto the grid. But instead of making the most of this opportunity, two far-right representatives in the state legislature introduced a suite of some of the most extreme anti-renewables bills anywhere in the country. The two lawmakers, Rep. David Marshall and Rep. Ralph Heap, were both campaigning to replace more traditional conservatives on the state’s public utility commission.

One particularly egregious bill aimed to classify new wind and solar energy projects within four miles of a residential property as “obscene” and “public nuisances,” effectively creating a de facto ban on most renewable energy projects. Other bills would have eliminated property tax discounts for new utility-scale renewable projects and mandated that public utilities get 85% of their generation from “non-intermittent sources,” effectively capping renewables at just a fraction of their potential.

“With energy demand in Arizona projected to spike by 40% over the next 15 years, banning the cheapest forms of energy in a state with abundant renewable resources makes absolutely no sense,” says Kevin Moran, who leads EDF’s state affairs work in Arizona.

“ Arizona has world-class solar and wind resources. We have 300 sunny days a year, but get just 13% of our electricity from the sun. ”

— Kevin Moran, EDF Arizona state affairs lead

Last year Arizona saw 122 days of over 100-degree weather and a punishing 12-day streak where temperatures topped 110 degrees. This year, the first 100-degree day hit Phoenix on May 18 — the earliest such scorcher on record.

EDF fought back to help make energy more affordable in Arizona, launching a campaign to combat these anti-clean-energy bills and counter the misinformation gaining traction in the state. Along with a clean energy coalition, EDF helped organize a petition, advertisements, videos from Arizona-based influencers, op-eds and letters to the editor to amplify the message that clean energy is the key to affordable energy in Arizona and that no one should be allowed to

infringe on the rights of landowners to lease their property for renewable development. We also rallied support from the business community who voiced their concerns about how restricting renewables would threaten the growth of Arizona’s booming tech and manufacturing industries. Thanks to these efforts, all of the bills died in the Republican-controlled legislature.

“Arizona has world-class solar and wind resources,” says Moran. “We have 300 sunny days a year, but get just 13% of our electricity from the sun. Rather than smothering that opportunity in restrictions and red tape to score political points with the Trump administration, let’s harness it responsibly to help create jobs and make life in Arizona cleaner and more affordable.”

“This is not about politics,” says Yuksek, the Phoenix-area homeowner. “It’s about cost of living and common sense.”

Joanna Foster



Funda Lyon Yuksek

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Air pollution, local solutions

By Vanessa Glavinskas & Anne Marie Borrego

WHEN HE FIRST RAN FOR MAYOR of Cleveland in 2021, Justin Bibb was virtually unknown. A political newcomer, early polls revealed that only about 5% of the city's residents even knew his name.

To change that, Bibb, a former non-profit executive, campaigned relentlessly — promising to work on public safety, modernize city hall and put Cleveland “back on the national map.” He'd often knock on doors to deliver his pitch himself. One of those doorstep conversations stuck with him. A mother living on Cleveland's southeast side — a primarily Black neighborhood — told him that the air pollution there was so bad, her son had developed asthma and struggled to breathe.

Bibb looked at the data and found that air quality was, in fact, worse in southeast Cleveland. Not only that, communities of color across the city also had fewer trees, which help to improve air quality, and sit closer to factories, highways and other sources of pollution.

“That's when the dots got connected,” Bibb told the *Data-Smart City Pod*. He began looking into how environmental conditions were shaping Cleveland and its residents and realized that pollution

impacted everything from educational outcomes to the city's economy.

Bibb's administration now wants to make industrial facilities in neighborhoods with poor air quality air and existing economic and health disadvantages undergo more stringent permitting processes. That plan is part of an effort to update the city's Clean Air Ordinance for the first time since 1977.

Local leaders fill the gap

Air pollution is a silent killer. Exposure is linked to everything from heart attacks and strokes to asthma, dementia and other serious health problems. Plus, many sources of air pollution also drive climate change, both contaminating the air and worsening extreme weather.

Since it was established in 1970, the U.S. Environmental Protection Agency has traditionally led the charge against air pollution, making significant improvements in air quality nationwide. Yet, in an unprecedented reversal, the Trump administration has rolled back important



Cleveland Mayor Justin Bibb

\$820 billion

Annual health damages from fossil fuel pollution in the U.S.

Source: EDF

protections against air pollution. In January, EPA Administrator Lee Zeldin even directed his staff to stop placing any value on the health benefits of pollution rules when determining air pollution



Electric buses, like these in Cleveland, can help reduce air pollution.

standards, despite the fact that pollution's costs are well documented; one study found that Americans face more than \$820 billion in health damages annually from fossil fuel pollution. Instead, Zeldin instructed his staff to only consider the cost of implementing protections.

In the absence of federal leadership, local leaders like mayors are doubling down on reducing air pollution. For example, Bibb's administration has been working with the Community Data Health Initiative. It's a collaboration between Data-Smart City Solutions at the Bloomberg Center for Cities at Harvard University, the African American Mayors Association, Meharry Medical College and EDF that helps city leaders take on environmental challenges that directly harm people's health.

To better regulate polluters, Cleveland officials are now working with partners and businesses across the city to consider the cumulative impact of air pollution on the neighborhoods closest to factories, highways and other environmental hazards.

In high-risk neighborhoods, the city's proposed update to the Clean Air Ordinance would require companies to conduct detailed health impact assessments, including air quality modeling and epidemiological risk analyses, before the city approves permits. While the mayor, local housing, workers' rights and health groups are behind the measure, it's currently stalled in the City Council after facing pushback from polluting industries.

“With good data and good policy, local leaders still have incredible power to reduce pollution and protect people's health.”

— Maria Harris, EDF air quality scientist



Still, “Cleveland's proposed Clean Air Ordinance is a shining example of innovation,” says EDF air quality scientist Maria Harris, who advises the Community Data Health Initiative. “It's the kind of policy that can actually protect people from air pollution.”



Other cities stepping up

City leaders across the country are finding new ways to clear the air for their residents. Local air quality monitoring on a granular level — a practice that has grown dramatically over the last decade, Harris says — is playing an important role. In Detroit, for example, city leaders are using hyper-local air quality data combined with EDF's U.S. Climate Vulnerability Index to create a customized tool that tracks local sources of pollution in high-risk neighborhoods. City officials are already using this data to reroute heavy trucks to reduce diesel pollution on the city's southwest side.

In Denver, adding 0.25% to the sales tax has proven to be a successful model to sustainably fund climate and clean air efforts, even as federal priorities change. The small tax, which voters approved in 2020, now generates roughly \$40 million per year to reduce local sources of climate pollution, including by making clean air investments such as energy efficiency upgrades to homes and offices and investments in solar power, battery storage and other renewable energy technologies.

All of these reduce the burning of dirty fossil fuels.

And in Houston, a city with hundreds of polluting petrochemical facilities, local leaders built an “Asthma Air Aware Alert System,” which sends alerts via

email, text or phone call to school nurses and parents when ozone, nitrogen dioxide levels, and wind forecasts create asthma-triggering conditions for children.

To expand efforts like these, EDF and partners in the Community Data Health Initiative are building tools like the City Clean Air Hub, launched in July, which helps cities leverage data to improve air quality by offering a variety of pollution, public health, communications and funding tools to support cities' efforts.

“Data is power,” says Harris. “No matter what happens at the federal level, with good data and good policy, local leaders still have incredible power to reduce pollution and protect people's health.” ■

10 WAYS CITIES CAN REDUCE POLLUTION:

- 1 Fund electric vehicle charging infrastructure
- 2 Improve infrastructure for public transit, cycling and pedestrians
- 3 Electrify municipal vehicles
- 4 Manage truck traffic to reduce congestion and diesel pollution
- 5 Create low-emission zones
- 6 Consider congestion pricing in heavily trafficked areas
- 7 Use air quality data when evaluating permits
- 8 Investigate pollution violations and enforce local laws
- 9 Get the community engaged in air quality monitoring
- 10 Create energy efficiency ordinances

'Tis the season — for a pollinator garden

NATIVE WILDFLOWERS AREN'T JUST BEAUTIFUL — THINK: BLACK-EYED SUSANS AND Virginia bluebells — they also feed and shelter the bees, butterflies and hummingbirds our food systems and ecosystems rely on. Gardens filled with these stunning plants are especially vital to birds and insects whose numbers are dwindling as habitats shrink.

In places with freezing-cold winters, fall and winter are the best times to plant pollinator gardens from seed. That's because seeds native to these regions require a winter's hard freeze and a spring thaw to germinate.

Sowing a pollinator garden can be a fun holiday project for the whole family — grandkids included. Whether planting milkweed in Maine or penstemons in Colorado, you'll feed bees, birds and butterflies for seasons to come.

HERE'S WHAT TO DO:

Determine your soil type

Choose a sunny spot. (Wildflowers love sun.) Scoop up some dirt and try to form a ball. If it crumbles, your soil is dry or sandy. If you have a ball, flatten it to make a thin ribbon — if you can, it's clay-rich. If it breaks, it's loamy. Seek out plants that prefer your soil.

Procure your seeds

Groups like the Xerces Society, devoted to insect conservation, offer local native plant lists online. Build a list according to your soil and region, with a mix of bloom times to keep your garden abuzz all season.

Wild Ones chapters, which promote native landscapes, often host seed swaps for members. And online shops like Prairie Moon Nursery sell seeds and mixes suited to regions across the continental U.S.

Plant your flowers

To sow a seed mix, clear the ground of vegetation and lightly rake the soil. Scatter the seeds, then cover with a light layer of sand or soil to help them stay put through the winter. (If it's already snowed, simply scatter your seeds over the snow.)

To grow individual plants, plant your seeds in labeled pots filled with organic compost, according to seed packet instructions. Store pots outside, away from kids and pets. Transplant seedlings the following spring or summer, well after the last frost.

Tend your garden

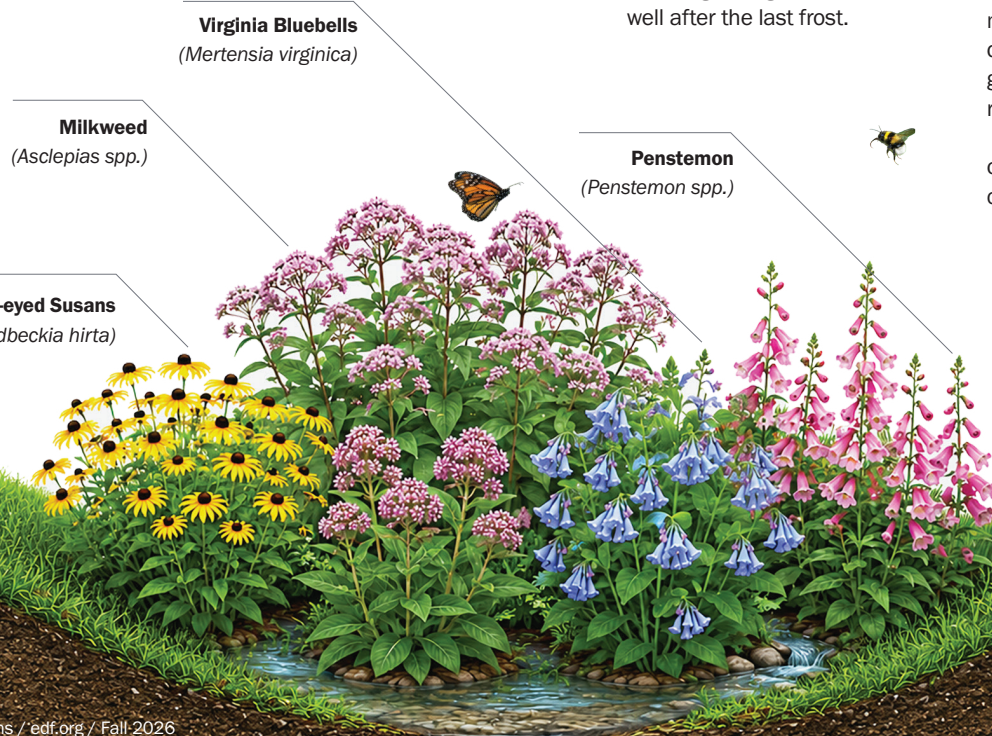
Native plants are lower maintenance than non-natives but need some upfront TLC to get established.

As seedlings emerge, use a phone app like iNaturalist to tell wildflowers from weeds. Weed regularly for the first two years. Spreading one to two inches of organic mulch can deter weeds and keep moisture in the soil, too.

Check with local native plant nurseries or extension centers on watering: Gardens in the humid Northeast or Mid-Atlantic may need weekly watering during a drought, while arid gardens in the Mountain West require far less.

Come fall, leave the leaves on the soil to nourish it — and consider sowing more seeds.

Nika Beauchamp



Virginia Bluebells
(*Mertensia virginica*)

Milkweed
(*Asclepias* spp.)

Black-eyed Susans
(*Rudbeckia hirta*)

Penstemon
(*Penstemon* spp.)

★ YOU GOT THIS DONE!

Local pollution shut down

AMANDA ROWOLDT ONLY STOOD outside the Freepoint Eco-Systems “advanced recycling” facility in Hebron, Ohio, for a few minutes in February 2025. “I can viscerally recall the physical symptoms I experienced — dizziness, headache, nausea,” says the Ohio organizer for Moms Clean Air Force, an EDF affiliate.

The video she took that day of toxic, black smoke billowing into the surrounding neighborhoods — a story featured in the Summer 2025 issue of *Solutions* — caught the attention of local press, lawmakers and the Ohio Environmental Protection Agency. It sparked a chain reaction that led the company to suspend operations this spring. Her actions also offer a blueprint for future action against

industrial plastic-burning facilities like this one.

An obscure loophole allowed the facility to bypass pollution-control monitoring required of most solid waste incinerators, as long as it could convert more than 70% of its plastic waste into useful ingredients for chemical plants and petroleum refineries under the guise of “advanced recycling.”

Between the time it opened in 2024 and the day Rowoldt shot her video, the plant had already racked up a series of violations and complaints, leading her to wonder if it really qualified for the claimed exemption.

So-called advanced recycling is neither advanced nor recycling. Companies burn plastic to generate chemicals that could be used to create other products. This process generates toxic air pollution, chemical waste and dangerous byproducts, including dioxins, PFAS, mercury and arsenic. They can put nearby residents at greater risk of cancer, birth defects, cardiovascular, respiratory, neurological and reproductive problems — all while producing little useful material. In addition to toxic pollutants, the burning itself releases greenhouse gases, contributing to climate change.



Freepoint Eco-Systems released toxic pollution.

Rowoldt’s video and complaint, coupled with a series of articles and support from other advocates, brought about real change. By April 2025, the Ohio EPA put Freepoint on notice that it no longer qualified as a recycling unit and could no longer claim an exemption from pollution monitoring. That led the company to suspend operations due to “market conditions.”

Freepoint has a similar facility planned for Eloy, Arizona, but Rowoldt notes the Ohio suspension “chips away at the narrative that this technology is viable or worthwhile.”

Meanwhile, she and other concerned residents plan to urge the state to disclose whether similar facilities, such as the Alterra Plastic Recycling Facility in Akron, are meeting the 70% threshold needed to operate under the loophole.

Says Rowoldt, “Advanced recycling is a highly polluting process and all children and families living near these facilities deserve to be protected.”

Anne Marie Borrego



Amanda Rowoldt

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