

Climate Coach

Down-to-earth advice for life on our changing planet.

By Michael J. Coren

Welcome. This week, medicanes and bull shark buddies. But first, how to get Silicon Valley to [help pay your electricity bill](#).



Installing a backup battery system at a home in Houston. (Brett Coomes/Houston Chronicle via Getty Images)

The tech industry needs massive amounts of electricity. The most overlooked power plant in the United States isn't a gas turbine or a solar farm: **It's your house.**

Tech companies are locked into a race to build artificial intelligence that comes down to speed and scale. AI infrastructure such as data centers, some argue, plays the role that railroads and canals did in the 19th century: The first firms to dominate will control the era's most transformative technology. Tech giants are expected to pour about \$2.7 trillion into data centers and AI infrastructure in the U.S. by 2030, estimates McKinsey, more than one Manhattan Project every month, in inflation-adjusted terms.

All that new equipment needs more electricity than the grid can deliver.

Google, Meta and others have resorted to modified jet engines, diesel generators and rebooting nuclear and coal plants to power their data centers, while asking electric utilities for grid upgrades. That's contributing to rising electricity prices, up 42 percent since 2020.

Your home offers another solution to the energy shortage. The concept is simple. When thousands of homes are coordinated together by software into what are known as distributed or virtual power plants (VPPs), they can deliver or free up a power plant's worth of electricity for the grid by dialing down consumption from smart appliances like electric water heaters or dispatching electricity from home batteries. This approach can bring hundreds of megawatts online in months, not the years it can take to build a new power plant.

Transmission lines move electricity through space to where it's needed. VPPs deliver power at the moment it's needed most. The grid tends to run at half capacity, because it's built for peak demand, so storing cheap off-peak power and discharging it when demand spikes effectively creates new capacity. Home batteries can recharge later using cheap power — often wind and solar — as demand ebbs.

All the new electricity that data centers will demand, likely 60 to 100 gigawatts by the early 2030s, could theoretically come from upgrading homes with smart appliances, heat pumps and batteries and operating them as VPPs, argues Rewiring America, a nonprofit dedicated to electrification. Residential electricity prices would drop at the same time, it calculates.

To make that scenario real, data center investments would need to invest in homeowners, not just new power plants. **It's already starting to happen.**

Send your questions and stories to climatecoach@washpost.com. I read all your emails.

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Field Sample



View from below the bull sharks in the 'Acres' at Shark Reef Marine Reserve

Bull sharks, it turns out, have friends.

Once seen as solitary creatures, a study published in the journal Animal Behaviour finds they share relatively complex social bonds.

[Read more](#) about the "active social preferences" of one of the most aggressive species of sharks on the planet.



Learning Curve

A winter heat wave roasted the United States last week.

On the last full day of winter, thermometers near Martinez Lake, Arizona, a desert community about 150 miles west of Phoenix, reached an astonishing 110 degrees. These heat extremes will become more likely, frequent and intense as the climate warms.

[Read more](#) about how a developing El Niño is expected to unleash even more heat across the planet into 2027.

The highest temperatures from March 20 to March 26



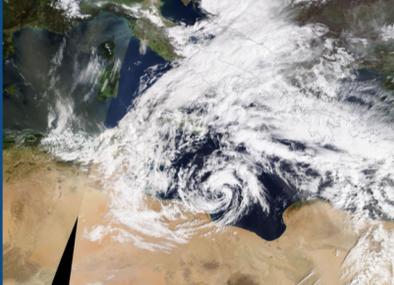
Heat spread from the West into Central and Eastern states. (Data from the Washington Post; ECMWF)



Snapshot

Meet the medicanne, a hurricane's Mediterranean cousin

One such storm made landfall this week in Libya. [Read more](#) about the evolution of the rare storms.



A medicanne swirls toward Libya on Tuesday. (NASA WorldView)



The Second Degree

Last week, I wrote about how the Yuka app is quietly [reformulating](#) America's food supply. You had suggestions on how to improve it.

"I recommend a solution I prefer to Yuka," writes Josh Spodek, a [leadership coach](#) and [environmental advocate](#) in New York City. "Fresh produce has no label to scan," he added, while also costing less, being healthier, funding local farmers and tasting better.

"Yuka sounds like a nice bandage for a symptom, but not buying packaged food addresses the problem closer to the root (pun intended)," Spodek wrote.

Shelby of Springfield, Massachusetts, wishes Yuka, or a similar app, would assess the environmental impact of foods. "Imagine if Yuka or something similar could tell us climate emissions, how much land was required to grow the food, water used, chemicals used and impact on sensitive places like rainforests," she said.



On the Climate Front

From The Post:

Cyclists' lawsuit [halts removal](#) of bike lanes that reduced crashes on the National Mall

You can drop off injured wild birds at this ['emergency room'](#)

As natural wine [goes mainstream](#), here's what the haters are missing

Meteor [explodes over Cleveland](#) in broad daylight

From elsewhere:

Why Brazil's 'bitter' coffee is thriving amid the climate crisis ([The Guardian](#))

Trump administration approves deepwater oil drilling in the Gulf of Mexico ([New York Times](#))

Three rivers may reunite decades after a failed Florida canal project ([Associated Press](#))

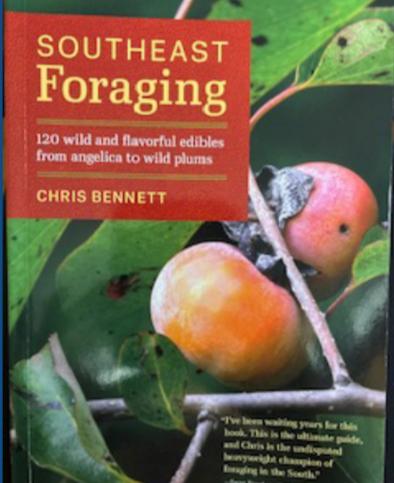
Finding climate refugia where the wild things thrive ([The Revelator](#))



Confronting invasive plants in her yard, Nike's daughter gave her a book that might change her strategy: [Southeast Foraging](#) by Chris Bennett.

"Maybe I will grow to dislike the chickweed that is currently covering a majority of my backyard (stopped using synthetic herbicides several years back) and enjoy it in a salad instead," she wrote.

Send me your photos and stories at climatecoach@washpost.com



See you next Tuesday.

Michael Coren, Climate Coach

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