

# TRUMP'S WORLD TIME



## THE GAZA DEAL

by ERIC CORTELLESA

## THE FIGHT FOR TAIWAN

by CHARLIE CAMPBELL

## PUTIN'S POWER PLAY

by SIMON SHUSTER



## CONTENTS

**7**  
**The Brief**

**21**  
**The View**

**28**  
**SPECIAL REPORT: MIDDLE EAST**

### Trump Diplomacy

In an exclusive interview, President Donald Trump details the events behind the cease-fire in Gaza, and the challenge of a lasting peace

*By Eric Cortellessa*

**36**  
**SPECIAL REPORT: TAIWAN**

### In the Shadow of War

The threat of invasion has grown palpable on the democratic island, where the question is not only “when” but also “how”

*By Charlie Campbell*

**73**  
**Time Off**

**44**  
**SPECIAL REPORT: UKRAINE**

### Power Struggle

How Vladimir Putin’s forces seized and occupied Europe’s largest nuclear plant while the world stood by

*By Simon Shuster*

**53**  
**TIME100**  
**Climate**

The 2025 list of the most influential leaders driving business climate action

**^**  
*President Trump in the White House on Oct. 21*

*Photograph by Stephen Voss for TIME*



FOUR SEASONS  
RESORT  
BORA BORA

# *LIFE IS BETTER OVER WATER*

Experience our private island paradise, surrounded by turquoise lagoons, ancient volcanic peaks, and the warmth of the Polynesian sun. Luxuriate in your overwater bungalow suite or beachfront villa estate, enjoy delectable open-air dining, take in tradition and culture through curated activities and exclusive experiences, and create lifetime memories with legendary Four Seasons service.

**BOOK NOW BY CALLING 888-521-6648 OR VISITING [FOURSEASONS.COM/BORABORA](https://www.fourseasons.com/borabora)**

**@FSBORABORA**

**On the covers**

To illustrate this week's cover on TIME's list of the 100 most influential climate leaders, we reached out to an artist who "paints with the sun." Michael Papadakis spent 10 days creating the cover art, capturing the sunlight in Boise, Idaho, using several different magnifying glasses. His process involves mapping the sun's path, calculating angles, sketching outlines, and planning how the light will travel across the surface. He then patiently holds the glass at varying angles to allow the sun to burn the image onto a 24-by-31-in. piece of untreated wood. "Sometimes I travel to find the light; other times I wait, preparing everything for its return," he says. "Patience is the secret tool no one sees. The sun always comes back, and when it does, I'm ready to meet it halfway." Read more about the cover and this year's honorees on [time.com](http://time.com)



Artwork by Michael Papadakis for TIME



Photograph by Stephen Voss for TIME  
Photographed at the White House on Oct. 21



**The future of AI**

At an Oct. 13 dinner in San Francisco celebrating the third TIME100 AI list, attendees talked about guiding AI with regulations, protecting human creativity, and fostering collaboration between human and machine intelligence. Refik Anadol (*left*), Dataland co-founder and designer of the issue's cover, argued that "every dataset is a record of life." [time.com/ai-dinner](http://time.com/ai-dinner)

Order your favorite covers at [timecoverstore.com](http://timecoverstore.com)

**TALK TO US**

SEND AN EMAIL: [letters@time.com](mailto:letters@time.com)  
Please do not send attachments

FOLLOW US: [@time](https://www.facebook.com/time) (X and Instagram)

Letters should include the writer's full name, address, and home telephone, and may be edited for purposes of clarity and space

**On trend**

An Oct. 22 TIME100 Impact dinner in NYC included a panel, in partnership with Ralph Lauren and Microsoft, on how AI may shape the future of fashion, with (*from left*) Microsoft's Shelley Bransten, Ralph Lauren's David Lauren, and Scilicet's Sougwen Chung, moderated by TIME's Sam Jacobs. [time.com/ai-fashion](http://time.com/ai-fashion)



**Back Issues**

Contact us at [customerservice@time.com](mailto:customerservice@time.com), or call 800-843-8463.

**Reprints and Permissions**  
Information is available at [time.com/reprints](http://time.com/reprints). To request custom reprints, visit [timereprints.com](http://timereprints.com).

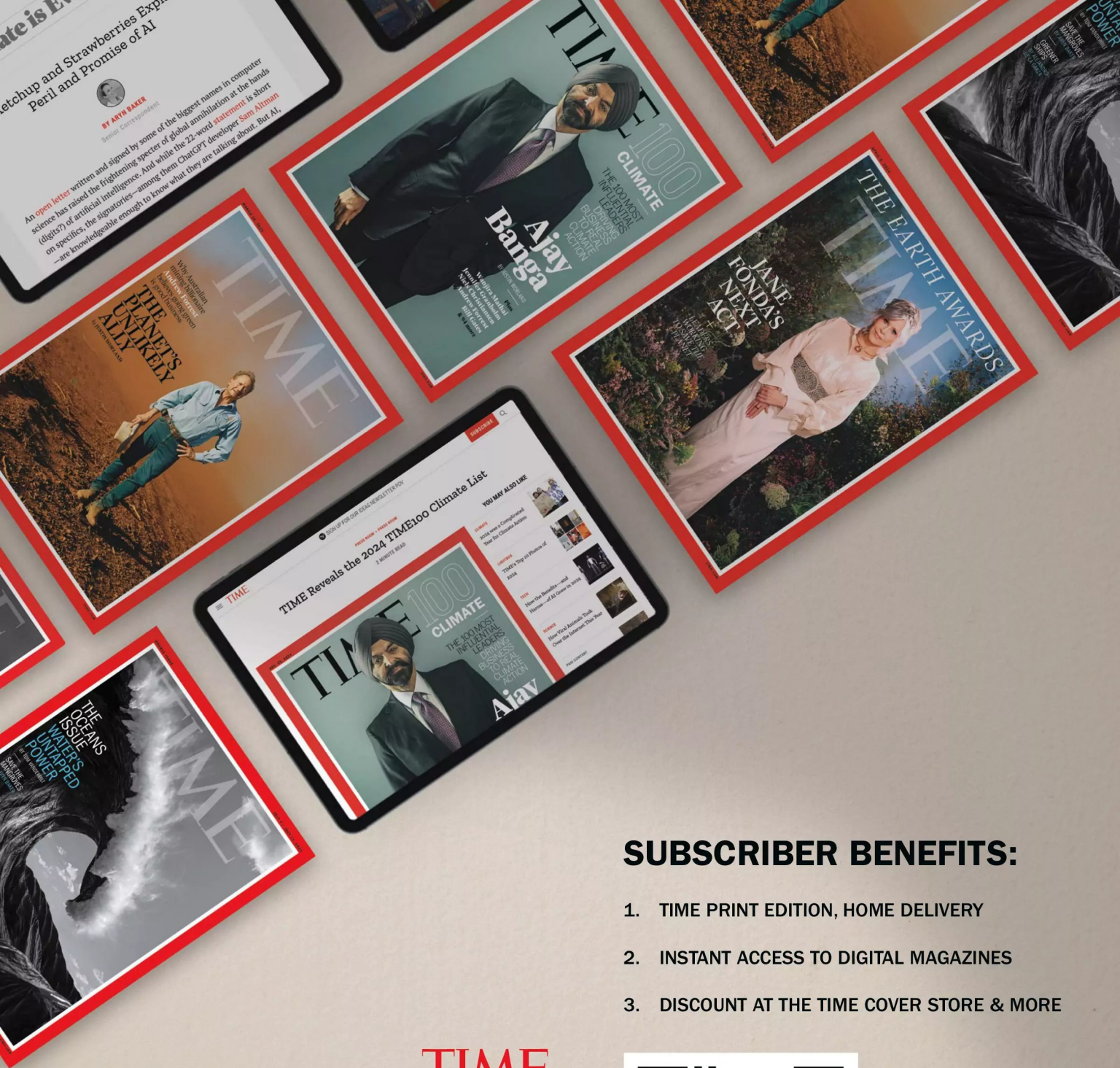
**Advertising**  
For advertising rates and our editorial calendar, visit [timemediakit.com](http://timemediakit.com).

**Syndication**  
For international licensing and syndication requests, contact [syndication@time.com](mailto:syndication@time.com)

Please recycle this magazine, and remove inserts or samples beforehand



**SUBSCRIBE**  
to TIME's newsletters  
Find all of TIME's email lists at [time.com/newsletters](http://time.com/newsletters)



**TIME**  
**DON'T**  
**MISS A**  
**MOMENT**

**SUBSCRIBER BENEFITS:**

- 1. TIME PRINT EDITION, HOME DELIVERY
- 2. INSTANT ACCESS TO DIGITAL MAGAZINES
- 3. DISCOUNT AT THE TIME COVER STORE & MORE



**TIME.COM/SUBSCRIBE**

# jitterbug®

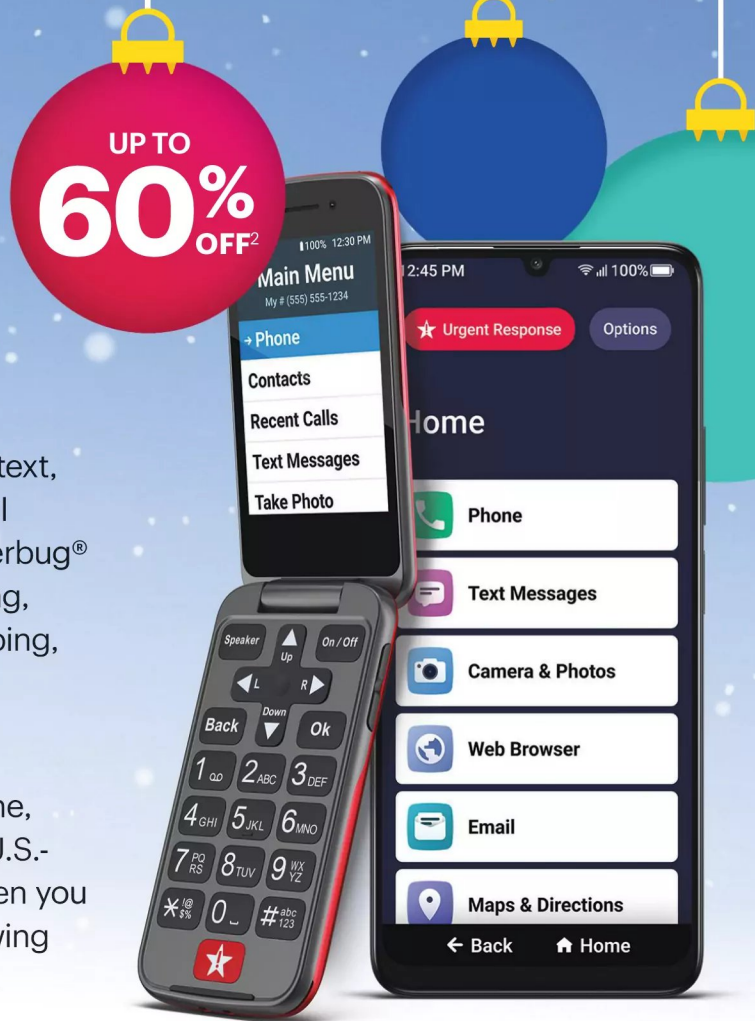
## Our easiest cell phones ever.

### Easy to use.

Jitterbug® phones feature large screens with big text, simple menus with effortless navigation, powerful speakers and Urgent Response buttons.<sup>1</sup> The Jitterbug® Flip2 has big buttons with one-touch speed dialing, while the Jitterbug® Smart4 comes with voice typing, video chat and internet access.

### Easy to get help.

Whether you want to learn more about your phone, need a ride or have a health concern, our 100% U.S.-based team is here to help, day or night. And when you add Urgent Response, enjoy peace of mind knowing you can count on us 24/7, even in an emergency.



## Don't Miss This Flurry of Savings!

- Fast, reliable nationwide coverage
- No long-term contracts
- No cancellation fees
- Keep your phone number<sup>4</sup>

Basic plans as low as

**\$14<sup>99</sup>**  
/mo.\*

2 lines as low as

**\$24<sup>98</sup>**  
/mo.\*

\*Plus \$3<sup>23</sup> admin. fee, variable USF/surcharges & taxes. Pricing is for Flip2 with paperless billing.

**Bring the whole family and save on each additional line.  
Choose a Jitterbug or keep your own phone with our Lively SIM kit.<sup>3</sup>**

**Call Now! 1.866.295.1389**

**BEST BUY**

available at  
**amazon**

[lively.com/phones](https://lively.com/phones)

**lively**® | From **BEST BUY Health**™

\*Pricing of \$14<sup>99</sup>/mo. and \$24<sup>99</sup>/mo. are for new lines of service on Flip2 with paperless billing. <sup>1</sup>Plans with Urgent Response available as low as \$34<sup>99</sup>/mo. Monthly fees are subject to change. See [lively.com](https://lively.com) for plans pricing. For a description of our fees and taxes, visit [lively.com/support/faqs](https://lively.com/support/faqs). Plans or services may require purchase of a Lively device and a \$35 one-time activation fee per line. Additional variable USF fee is added to activation fee. <sup>2</sup>60% off \$119<sup>99</sup> Smart4 and 50% off \$79<sup>99</sup> Flip2 prices valid for new lines of service only through 12/20/25. <sup>3</sup>Lively cannot guarantee Lively SIM compatibility with every device. Test device after activation to confirm compatibility. Preferred and Premium plans are not available on flip phones with SIM. Not all services available on all plans. Urgent Response, Nurse On-Call and Operator Services available 24/7. For Customer Service business hours see [lively.com/support/faqs](https://lively.com/support/faqs). Urgent Response tracks approx. location of phone when phone is turned on and connected to network. Lively does not guarantee an exact location. Lively is not a healthcare provider. Lively Rides service is arranged through the Lyft Platform. Ride fares are applied to your monthly Lively bill. Consistently rated among top wireless providers as fast and reliable by RootMetrics. <sup>4</sup>Porting is dependent on availability of the phone number requested and is subject to approval of the existing carrier. Screen images simulated. Phone appearance varies. Lively and Jitterbug are trademarks of Best Buy Health, Inc. ©2025 Best Buy. All rights reserved.



**Learn More**

# The Brief



## MOVING TARGET

BY PHILIP ELLIOTT

On Fox News and in GOP plans, NYC Democrat Zohran Mamdani defies expectations

INSIDE

BEHIND THE SOARING COST OF HEALTH INSURANCE

THE CAPTIVATING VERSATILITY OF DIANE KEATON

TECH'S BIG BET ON NUCLEAR FUSION

**Z**OHRAN MAMDANI WAS RIGHT WHERE REPUBLICANS wanted him—sitting for an Oct. 15 interview with MAGA favorite Fox News, where they hoped the millennial leftist on track to be the next mayor of New York City would deliver sound bites they could use against Democrats across the country. It might even provide his opponents ammunition in the mayoral debate slated for the following evening.

But Mamdani proceeded to give a cautious answer on peace in the Middle East and avoided taking petty jabs at President Donald Trump and his family when given an opening. He apologized for comments critical of law enforcement. And as he defended his plans to make the city's buses free, subsidize childcare, and hike taxes for the top 1% of New Yorkers, it all came in a reasonable tone that was far from the Ghost of Che Guevara.

For those looking to find an avatar that could push the Democratic brand even further down the drain, the debate the next day was similarly disappointing. As he parried with his two major opponents and avoided significant gaffes, Mamdani demonstrated how smoothly he has adapted to a spotlight that has melted other contenders.

It was the latest sign that the Republican dream of making Mamdani into a Democratic bogeyman may be harder than expected to realize. While Democrats running in midterm election races across the country braced for Mamdani to come up in opponents' attack ads and fundraising ploys, it's unclear how much of it will resonate outside of the Big Apple. Conversations with players in both parties reveal that Republicans' drive to lash Mamdani's brand of politics to Democratic contenders thus far has been a mixed bag.

If polls are to be believed, New Yorkers are about to elect a man who would be the city's first Muslim mayor—one who won the Democratic nomination to the dismay of many in the party and the early glee of Republicans. Neither Senate minority leader Chuck Schumer nor House minority leader Hakeem Jeffries has bothered to endorse their fellow New Yorker. Former President Barack Obama cut ads for Democrats running for governor of New Jersey and of Virginia but is on the sidelines of the New York City race. The Democratic National Committee congratulated Mamdani on his primary win but is hardly sending resources. Even the Democratic Mayors Association has not yet backed an all-but-certain future member.

GOP insiders see potential. A Republican running for New York State attorney general sent a fundraising email calling Mamdani “the kiss of death for Democrats,” and

Republican Representative Elise Stefanik, who is aiming to unseat New York Governor Kathy Hochul next year, described Mamdani in a press release as “Kathy Hochul’s Endorsed Jihadist.”

But some Republicans also quietly concede that Mamdani is tough to cast as the architect of Democrats' national strategy. The sharp 34-year-old state legislator may be in the center of the media universe, but no one looks at New York mayors as the deciding force inside the Democratic Party. “How did Bill de Blasio and [Mike] Bloomberg do in 2020?” asks a GOP alumnus of the Republican National Committee's senior staff, bringing up two recent New York mayors who sought the presidential nomination, and failed to get even a little traction.

Another rub: it's hard to use him to scare voters beyond the boroughs when even many New Yorkers don't know much about Mamdani. In a Quinnipiac poll conducted a month out, 19% of likely New York City voters said they hadn't heard enough about him to even have an opinion of him. Nationally, he's even less known. “I'm no Mamdani fan, but he isn't why we have problems,” one Democratic strategist says.

Still, many in the consultant class recall how Democrats' political bloodbath in 2010 was predicated on Republicans' demonizing Nancy Pelosi, who was a ubiquitous House Speaker at the time. FIRE PELOSI, read the banner hanging from the Republican National Committee headquarters just south of the Capitol. Republicans made the race personal. It worked.

**MAMDANI CLEARLY CAN READ** the situation, and both the potential and peril his party faces. Before 3,000 supporters in the north Manhattan neighborhood of Washington Heights on Oct. 13, it seemed like he was ready to break the very Democratic establishment that fears him. “Our movement is a movement where we know exactly who and what we are fighting for,” Mamdani roared. “We are not afraid of our own ideas. For too long we have tried not to lose. Now it is time that we win.” Two days later in the Fox News studio, Mamdani pitched himself as a partner for anyone, including Trump, who has threatened to withhold federal money for New York if the young upstart prevails. “I will ... be a mayor who is ready to speak at any time to lower the cost of living,” he pledged.

In an era when celebrity is a substitute for substance and norm-breaking behavior fuels fundraising, Mamdani might become a leading voice for Democrats as well as a vulnerability. Two things can be true at the same time. □

**‘We have a communist who’s 33 years old, doesn’t know a damn thing.’**

—PRESIDENT DONALD TRUMP,  
TO REPORTERS ON OCT. 14

**NEW  
ITINERARY  
NEW SHIP**



*Discover*  
**THE GREAT LAKES**

Cruise the Great Lakes, the world's largest freshwater ecosystem, in complete comfort aboard the brand-new *American Patriot*. With just 130 guests, enjoy personalized service, spacious amenities, and exquisite cuisine as you explore picturesque ports and breathtaking natural wonders.

*Small Ship Cruising Done Perfectly®*



MACKINAC ISLAND



Call  
**800-913-2493**  
to request a  
★ **FREE** ★  
Cruise Guide



## Church and state

Pope Leo XIV stands with the U.K.'s King Charles III and Queen Camilla in front of Apostolic Palace in Vatican City on Oct. 23. During the state visit, the King, who is supreme governor of the Church of England, prayed with the Pontiff, marking the first time a British monarch has done so in nearly 500 years, since King Henry VIII broke away from the Catholic Church.

### THE BULLETIN

## How thieves carried out an audacious heist at the Louvre

A BRAZEN DAYLIGHT HEIST LEFT the Louvre Museum in Paris reeling on Oct. 19. It took just a few minutes for thieves to execute the robbery, coming away with jewels worth an estimated 88 million euros, once belonging to Napoleon and his empresses. The police investigation remains ongoing.

**7-MINUTE RAID** French newspaper *Le Parisien* reported that two of the four thieves, masked and hooded, entered the museum via the Seine-facing facade at around 9:30 a.m. Construction work aided their heist, as a cherry picker allowed them to access the Apollo Gallery jewel room directly. French Interior Minister Laurent Nuñez said the raid lasted just seven minutes. The robbers reportedly

escaped on scooters. A crown of the empress Eugénie (*pictured*) was recovered damaged, apparently dropped by the thieves in their haste to escape.

**UNDERSTAFFED** The Louvre has faced persistent staffing issues in recent months, with employee strikes closing the museum for hours this summer after workers raised concerns about overcrowding and mass tourism.

In 2023, the museum decided to limit visitors to just 30,000 per day. Although it is unclear whether staffing issues contributed to the theft, unions stated in June that workers were still under immense

pressure, with too few eyes on too many entrances.

**HEIST HISTORY** This wasn't the first high-profile heist at the Louvre. In 1911, a former employee, Vincenzo Peruggia, stole the famous *Mona Lisa* in the hopes of returning it to its original country of Italy. At the time, Leonardo da Vinci's masterpiece was not the world-renowned painting it is today, but the theft helped it grow in fame. More than two years after the theft, Peruggia attempted to sell the painting in Florence, which was when he was caught and the *Mona Lisa* was returned. —REBECCA SCHNEID and SOLCYRÉ BURGA



# UNDO YOUR FLU SYMPTOMS

**NEW!**



THE  
DAYTIME,  
COUGHING,  
SORE THROAT,  
ACHING,  
ACHING,  
ACHING,  
FEVER,

**UNDO  
YOUR FLU,  
MEDICINE.**

USE AS DIRECTED. KEEP OUT OF REACH OF CHILDREN.

## GOOD QUESTION

## Why do health-insurance costs keep rising?

BY ALANA SEMUELS

JACOB MCDONALD KNOWS HE'S LUCKY TO HAVE A GOOD health-insurance plan through his employer, a tech company. But when his company recently updated employees about their options for health care in 2026, he was disappointed to learn that once again, costs were going up.

To cover his family of four, McDonald, 47, a network engineer based in Dallas, is being asked to pay 6.5% more than he did last year toward health insurance. "I expected to pay more, but this is the largest increase I can remember," he says.

Ballooning health care costs are driving up the price of insurance for the 154 million Americans who rely on employer-sponsored coverage. Starting this month and into January, employees will be able to pick their plans for the next year during the open-enrollment process and get a sense of just how much more they'll pay. One recent survey by Mercer found that employers expect to pay an average 6.5% more for health care for their employees in 2026, which is the highest increase since 2010. Another poll of employers by the Business Group on Health found that respondents projected health care costs to jump 7.6% in 2026, on average—the highest increase in over a decade.

The rise in health care costs also affects people who don't have health insurance through an employer, an issue that accounts for the government shutdown that began Oct. 1. Democrats and Republicans are at odds over extending subsidies that reduced premiums for Affordable Care Act (ACA) plans starting in 2021. Without the subsidies, which Democrats favor, ACA premiums will rise by an average of 75% in 2026.

While health care costs typically grow every year, the past few years have seen a steep increase in prices, according to Mercer. After a decade in which growth hovered around 3% annually, 2026 is the fourth year in a row where costs surpassed that mark.

A few factors are driving the cost surge. Inflation is the most obvious. Sunit Patel, senior partner and chief U.S. health actuary of Mercer, notes that overall inflation in the economy takes a while to work itself into the health care system. But doctors are charging more this year than they were last year, in part because of those inflationary pressures. And labor costs at those doctors' offices and at hospitals are rising, says Matthew Rae, the associate director of the Program on the Healthcare Marketplace at KFF, a health care research organization.

At the same time, people are making greater use of

doctors and hospitals, after a few pandemic years in which they stayed away from places where sick people gathered. Insured employees are also using GLP-1s, which are extremely costly, to lose weight and stay healthy. "A combination of things puts pressure on premiums, but 6% to 7% is a meaningful increase," says Rae.

KFF released a survey of 1,800 employers in October that found an employee's share of premiums to cover a family of four in 2025 reached \$6,850. That's up 6% from a year before, while wages grew 4% during that time. Employers are feeling the pain as well, because workers pay only a quarter of a premium that, all told, reached almost \$27,000. As a result, many are asking employees to pay more. The average deductible that employees paid in 2025, \$1,886, has increased 17% over the past five years and 43% over the past 10 years.

**THE RISING COSTS** are forcing some employers to make difficult decisions—if they absorb the expenses to protect their employees, they may have to make cuts in other parts of their business.

If they pass the price increases on to employees, they might face pushback.

Indeed, after most employers get first quotes from health-insurance companies on costs, they negotiate, eliminating some benefits or plan choices to bring costs down. Without those negotiations, for instance, Mercer estimates that plan costs would grow 9% in 2026 rather than 6.5%.

This year will see 59% of employers making cost-cutting changes to their plans, according to Mercer, up from 48% making changes in 2025 and 44% in 2024. That could include no longer covering GLP-1 drugs, or raising deductibles and out-of-pocket maximums. Employees will probably still stick around; for most people, even with the increased costs, a health-insurance plan through their employer is the best deal they're going to find. □



**'This is  
the largest  
increase  
I can  
remember.'**

—JACOB MCDONALD,  
TECH WORKER



**DIED**  
**Diane Keaton**  
*Actor extraordinaire*

FOR THOSE OF US WHO measure our lives in movies, actors aren't just performers who have given us joy. They're people who have walked along with us year by year. To watch ourselves age is not much fun, but to watch *them* age is the privilege of a lifetime.

That's how it was with Diane Keaton, who died on Oct. 11 at age 79. She was so many things: a wonderful

photographer, a fine director, an individual of marvelously expressive personal style. But mostly, she was one of the most sparkling and versatile actors of her generation, one who took full advantage of the freedom newly afforded to actresses in the 1970s, even as the men of the new Hollywood—performers like Robert De Niro and Al Pacino, one of Keaton's great loves—drew louder praise.

Keaton landed her first major film role in 1972, opposite Pacino in *The Godfather*. She's heartrending

<  
*Keaton:*  
*effervescent*  
*original*

as Michael Corleone's wife Kay, ready to be a dutiful wife and mother, only to be shut out of her husband's orbit. Her career thrived in the 1980s and beyond—she's staggering as an abandoned wife in the end-of-a-marriage drama *Shoot the Moon*—and, in the 1990s and 2000s, she was often the best thing about comedies like *Something's Gotta Give*. In 1995, she made her fiction-feature directorial debut with the freewheeling, briskly sweet picture *Unstrung Heroes*.

Through it all, Keaton has always felt like a person we knew, largely because of the role her then boyfriend Woody Allen wrote specially for her, the title character of 1977's *Annie Hall*. As the onetime girlfriend of Allen's preternaturally neurotic comedian Alvy Singer, Keaton breezes through like a gust of autumn wind—she's as captivating and capricious as a curlicue of airborne leaves. Nonchalant and focused at once: that was Keaton, inviting us along on a path of adventurous curves and turns, one whose length we would never think to measure until we looked back and saw how far we'd come.

—STEPHANIE ZACHAREK

**DIED**  
**D'Angelo**  
*Soul genius*

The R&B singer D'Angelo, who died on Oct. 14 at the age of 51, forged countless moments of artistic brilliance over his three-decade career. He was an electric live performer who perfected multiple instruments, as well as a studio wizard who crafted three near-perfect albums: *Brown Sugar* (1995), *Voodoo*—which TIME named the best of 2000, and which included the classic song "Untitled (How Does It Feel)"—and *Black Messiah* (2014).

D'Angelo distilled musings about sex, suffering, love, and oppression into musical masterpieces. But he also struggled in his personal life, wrestling with alcoholism, drug abuse, and anxiety. His family said that he died after a prolonged battle with cancer. —Andrew R. Chow



**DIED**  
**Ace Frehley**, a founding member and lead guitarist of the glam rock band KISS, on Oct. 16 at 74. Frehley, who designed the group's iconic logo, was known for using pyrotechnic effects on his guitars.



**DEMOLISHED**  
The **East Wing of the White House**, as ordered by President Donald Trump, to make way for a 90,000-sq.-ft. ballroom that is estimated to cost between \$200 million and \$300 million.

**RELINQUISHED**  
His titles, by Britain's **Prince Andrew**, on Oct. 17, amid scrutiny over his ties to convicted sex offender Jeffrey Epstein. "Continued accusations about me distract from the work of ... the Royal Family," he said.

**RELEASED**  
Former Republican Representative **George Santos** of New York, from prison on Oct. 17, after President Trump commuted his seven-year fraud sentence. Santos served less than three months.

## INNOVATION

# The promise of nuclear fusion power

BY HARRY BOOTH

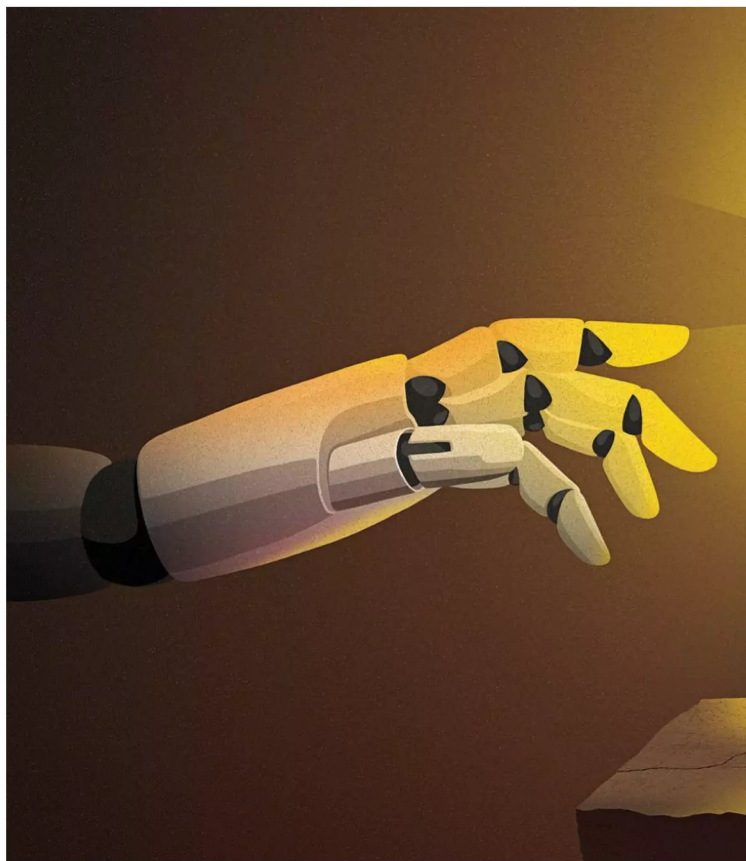
WHEN SAM ALTMAN ARRIVED AT HELION ENERGY'S SMALL Redmond, Wash., office in early 2014, nuclear-fusion textbooks tucked under his arm, the company was focusing its efforts on research and development. By the time he left, several days later, he had persuaded the fusion-energy startup to chart a more aggressive path toward deployment, CEO David Kirtley recalls. A year later, Altman, who was co-founding OpenAI around the same time, invested \$9.5 million in Helion, taking the role of chairman. He plowed a further \$375 million into Helion in 2021, making it one of the largest personal bets in his multibillion-dollar portfolio.

Once a government-led pursuit, nuclear fusion is now a private-capital race, much of it financed by the same people building energy-hungry AI and pursuing the goal of creating systems with human-like intelligence, known as artificial general intelligence (AGI). The fusion-energy industry's total funding has jumped from \$1.7 billion in 2020 to \$15 billion as of September 2025, according to a report by E.U. body Fusion for Energy. Alongside Altman, who has said AI's future depends on an energy breakthrough, investors in Helion include OpenAI funder SoftBank as well as Facebook co-founder and early Anthropic backer Dustin Moskovitz. Nvidia has backed Helion rival Commonwealth Fusion Systems (CFS). So too has Google, which has also invested in another player, TAE Technologies. "AI is a big driver [due to] the energy needs ... to power their data centers," says Troy Carter, director of Oak Ridge National Laboratory's fusion-energy division.

Recent engineering progress and the flood of cash from investors willing to chase moon shots have some firms promising grid power within years rather than decades. They must still prove the technology works, but if fusion delivers, it would provide carbon-free power without solar and wind's seasonal fluctuations or nuclear fission's long-lived radioactive waste—a breakthrough that wouldn't just lower power bills, but reshape what's possible.

**FUSION, THE SAME REACTION** that powers the sun, makes energy via the opposite process of today's nuclear power plants, joining light atoms rather than splitting heavier ones. Deep in a star's core, this occurs in plasma, a super-hot, electrically charged gas. Re-creating that on earth has proved the mother of all engineering problems.

For decades, even as scientists were able to spark a fusion reaction, it generated less energy than required to heat the plasma, known as scientific break-even. But in 2022, researchers at Lawrence Livermore National Laboratory made history. Using giant lasers to briefly crush a tiny fuel pellet, they demonstrated for the first time a fusion reaction that generated more energy than was used to heat the



plasma. No private company has hit this milestone.

If or when they do, getting power onto the grid will require going a step further: generating not just more energy than was used to heat the plasma, but enough to power the entire generator, known as engineering break-even. Of the firms racing to hit that milestone, Helion is running to the most bullish schedule. The company expects a commercial version of its machine to provide electricity by 2028 from a site in Malaga, Wash., where construction began in July. Helion has already signed a deal to sell 50 megawatts of fusion power to Microsoft and faces financial penalties if it veers from its timeline.

Unlike most fusion efforts, which boil water to spin a turbine, Helion plans to harvest electricity by hurling two plasma rings together at about a million miles an hour. The collision would trigger fusion, perturbing a magnetic field, which in turn produces power. Kirtley says the setup currently

ILLUSTRATION BY PETE RENOLDS FOR TIME



**‘AI is a big driver [due to] the energy needs.’**

—TROY CARTER,  
OAK RIDGE NATIONAL  
LABORATORY

recaptures about 96% of its energy input—sort of like how an EV uses regenerative braking to recharge a bit during a trip. That puts it within a hair of break-even already. Polaris, Helion’s seventh-generation prototype, was slated to demonstrate engineering break-even in 2024. The prototype was fired up for the first time late that year. Kirtley declined to share results.

Kirtley, who credits Altman with encouraging him to “go faster and at bigger scale,” envisions not only being first to build a fusion plant. “Our goal is to ... build a generator per day and deploy fusion systems all over the world. And do that quickly.”

That kind of ambitious thinking has credibly brought fusion’s arrival closer, Oak Ridge’s Carter says. In 2020 he led a Department of Energy report that said a pilot nuclear-fusion plant could be built by the early 2040s, but he now thinks it’s possible that goal could be achieved by the mid-2030s. And beyond capital, AI is a useful tool for scientific progress. “The advent of

AI has made some very challenging problems in the plasma space more accessible,” says Nuno Loureiro, director of MIT’s plasma science and fusion center.

Even if Helion’s plan were to run a few years behind schedule, it could still hit many world firsts. And if its approach doesn’t pan out, others are lining up right behind it.

California-based startup Pacific Fusion says it has designed a machine that would hit engineering break-even using the same approach as the Lawrence Livermore National Laboratory’s device. It launched in 2024, revealing \$900 million from investors including former Google CEO Eric Schmidt and Microsoft AI CEO Mustafa Suleyman.

CFS, which spun out of MIT in 2018 to become the best-funded fusion startup, is pursuing a different approach: creating a magnetic bottle that holds an ultra-hot plasma in place. CFS is building a pilot that it believes will pass scientific break-even in 2027. The company is so bullish that it has begun work in parallel on a commercial plant that it expects to deliver that energy to the grid in the early 2030s. Google has already agreed to buy 200 megawatts. “[Having] these big hyperscalers behind us is really helpful,” says Brandon Sorbom, CFS’s co-founder and chief science officer, adding that it signals to suppliers who provide superconducting magnets and other difficult-to-manufacture materials that “this isn’t a one-off science experiment.”

Meanwhile, New Zealand-based upstart OpenStar generated plasma in late 2024 with a relatively modest \$10 million in funding and has since raised a further \$14 million. Its prototype flips the “magnetic bottle” concept inside out, with an ultra-strong magnet at the core of the reactor, around which the plasma is confined.

**WHILE OPTIMISTIC ABOUT** the number of startups vying to become industry leaders, Carter warns that a high-profile failure could spook investors and dent the field’s credibility. “You hope the hype doesn’t get too much; [that] a failure of one of the more visible companies does not pull the plug on progress that we have elsewhere,” he says.

Still, fusion can’t come fast enough for the likes of Google and Microsoft. Both are building new data centers to power AI, even as Microsoft targets being carbon-negative by 2030 and Google targets net-zero. The data centers powering AIs run 24/7; without an energy-storage breakthrough, variable wind and solar won’t reliably cover that load. And supply is tight: U.S. power generation has barely budged since 2010, the year it was overtaken by China as the world’s largest electricity producer. Even fossil fuel might struggle to scale as compute soars. Altman and Nvidia’s Jensen Huang now call energy the key bottleneck.

But unlocking fusion power will have repercussions far beyond powering data centers. It could be built where energy is needed, rather than where wind or solar conditions are best. And with abundant energy, global economic and geopolitical dynamics could be turned on their head. “Most of our wars are fought over energy,” Carter says. “If that’s no longer the driver, that changes things dramatically.” —*With reporting by* BILLY PERRIGO ▣

## 5 things therapists wish every kid knew

BY ANGELA HAUPT

You never know what's going to stick in the littlest minds. "Sometimes I'll have kids tell me something their grandmother or coach said—and it might be something that the rest of us would shrug off, but for that child, it really made an impact," says Amy Morin, a therapist and author of *13 Things Strong Kids Do*. That's why it's important for parents to get into the habit of repeating the nuggets of wisdom that they hope will become mantras bouncing around in their kids' minds for years to come. We asked Morin and other therapists to share the easy-to-remember gems they wish every kid knew.

### 1. "Listen to your shoulder angel."

When Morin talks to kids, she explains that we all have a "devil" on one shoulder, telling us to do things that might feel good in the moment but aren't the best choice, and an "angel" on the other, telling us to do the right thing. "Those are the two voices you hear in your head when Mom says, 'Don't eat the cookie,' and the little devil says, 'No, grab it,' and your shoulder angel's saying, 'No, you really shouldn't,'" she says. "You have the power to decide which one you're going to listen to."

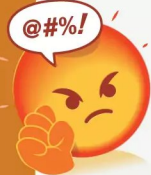
That memorable image can communicate a valuable lesson about how good it feels to be able to make a positive choice, which in turn can boost kids' confidence and independence.



### 2. "Mean people are just showing how they feel about themselves."

If someone is bullying you, Morin tells her youngest clients, it's because they feel bad about themselves. "It's so important for kids to know that if you felt good about yourself, you'd be kind to other people," she says. "Mean people's words and behaviors are a reflection of what's going on inside of them, not you."

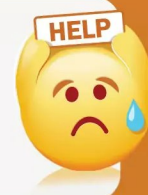
That's not an excuse for bullies' hurtful behavior, she adds. But it does invite empathy. Ideally, kids will start to think, "OK, there's something else going on with this person that I don't know about," Morin says—and then they won't take that name-calling or those mean words quite so personally.



### 3. "Asking for help is a kind of bravery."

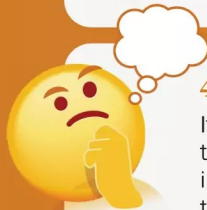
Certainly, independence is important. But kids don't need to figure everything out on their own—and learning that it's OK to ask for help is a lifelong skill.

"It's vulnerable, for sure, and I think that's why people don't always do it," says Naveen Khalfan, a licensed marriage and family therapist at Headspace. "But vulnerability is a strength."



### 4. "Just because you have a thought doesn't make it true."

It's OK to question your brain—and in fact, it's a good idea to get in the habit of noticing and challenging negative thoughts. "We have this idea that if we're thinking something, we have to pay attention to it, and that there's meaning there," says Natalie Bernstein, a psychologist in Pittsburgh. That's not necessarily the case. Instead, "approach that thought with curiosity," she advises kids. "Be an investigator—don't just take it as a fact. Look into it a little bit."



### 5. "You are loved for who you are, not what you do."

In this achievement-oriented world, when kids are overscheduled with extras like private lessons and multiple competitive leagues, it's easy to equate success with worthiness. "Validation can feel like it's only coming through their performance on the sports team," Bernstein says. But what happens if you decide you want to quit softball or don't have a good game?

It's important to start learning at an early age that "your parents aren't there because they're thinking you're going to hit a home run," she says. "They're there because they want to support you and you like the sport."

The sooner that message becomes imprinted on a kid's brain, the less likely they are to lean into the anxiety and perfectionism that could chase them for a lifetime.



# A PERFECT MOMENT TO FOCUS

Connect to the perfect silence with our noise  
cancelling headphones.



**TURKISH AIRLINES**



IDS  
FF  
X  
ic

Liberty  
not  
Tyranny

NO  
KINGS  
JUST  
QUEENS

WE  
ARE THE  
QUEENS

SUPPORT SHAKIRA  
VENEZUELAN TRANS  
WOMAN IN ICE DETENTION



"God gives us many trials, and this is mine. We must respond with strength"  
Shakira



ROTEC  
HE  
LS

We We People  
We We People  
We We People  
We We People

WE  
WE  
PEOPLE

# Protesting the President

In New York City, the Oct. 18 “No Kings” march reflected the diversity both of the city and the issues. Organizers said the second such round of demonstrations against President Donald Trump’s agenda involved 2,600 events across the U.S. and more than 5 million people.

Photograph by Neil Constantine—  
NurPhoto/Getty Images  
For more of our best photography,  
visit [time.com/lightbox](http://time.com/lightbox)



# TIME WORLD'S GREATEST PLACES

2025

## ARE YOU THE BEST:

### Place to Stay

Hotel, resort, cruise, or  
homestay program

### Place to Visit

Attraction, cultural institution,  
park, restaurant, or bar

APPLY NOW

[TIMEGREATESTPLACES.COM](http://TIMEGREATESTPLACES.COM)



## United States Postal Service

### Statement of Ownership, Management, and Circulation

(All Periodicals Publications Except Requester Publications)

1. Publication Title: TIME
2. Publication Number: 0086-5800
3. Filing Date: Oct. 1, 2025
4. Issue Frequency: Twice a month except monthly in June and August
5. Number of Issues Published Annually: 22
6. Annual Subscription Price: \$49.00
7. Complete Mailing Address of Known Office of Publication: 3 Bryant Park, New York, N.Y. 10036
8. Complete Mailing Address of Headquarters or General Business Office of Publisher: 3 Bryant Park, New York, N.Y. 10036
9. Full Name and Complete Mailing Address of the Publisher, Editor and Managing Editor: Publisher: Jessica Sibley (Chief Executive Officer) 3 Bryant Park, New York, N.Y. 10036; Editor: Sam Jacobs (Editor in Chief) 3 Bryant Park, New York, N.Y. 10036; Managing Editor: Lily Rothman 3 Bryant Park, New York, N.Y. 10036.
10. Owner: Time USA, LLC. 3 Bryant Park, New York, N.Y. 10036
11. Known Bondholders, Mortgages, and Other Security Holders Owning or Holding 1 percent or more of Total amount of Bonds, Mortgages, or Other Securities: None
12. Tax Status (For completion by nonprofit organizations authorized to mail at nonprofit rates). Check one: The purpose, function, and nonprofit status of this organization and the exempt status for federal income tax purposes:  Has Not Changed During Preceding 12 Months  Has Changed During Preceding 12 Months (Publisher must submit explanation of change with this statement) Not applicable.
13. Publication Title: TIME
14. Issue Date for Circulation Data Below: Sept. 29, 2025
15. Extent and Nature of Circulation
  - Average No. Copies Each Issue During Preceding 12 Months:
    - a. Total Number of Copies (Net Press Run): 761,226
    - b. Paid Circulation (By Mail and Outside the Mail):
      - (1) Mailed Outside-County Paid Subscriptions Stated on PS Form 3541 (Include paid distribution above nominal rate, advertiser's proof copies, and exchange copies): 555,417
      - (2) Mailed In-County Paid Subscriptions Stated on PS Form 3541 (Include paid distribution above nominal rate, advertiser's proof copies, and exchange copies): 0
      - (3) Paid Distribution Outside the Mails Including Sales through Dealers and Carriers, Street Vendors, Counter Sales, and Other Paid Distribution Outside USPS: 15,339
      - (4) Paid Distribution by Other Classes of Mail Through the USPS (e.g., First-Class Mail®): 0
    - c. Total Paid Distribution (Sum of 15b (1), (2), (3), and (4)): 570,756
    - d. Free or Nominal Rate Distribution (by Mail and Outside the Mail):
      - (1) Free or Nominal Rate Outside-County Copies included on PS Form 3541: 81,091
      - (2) Free or Nominal Rate In-County Copies included on PS Form 3541: 0
      - (3) Free or Nominal Rate Copies Mailed at Other Classes Through the USPS (e.g., First-Class Mail®): 0
      - (4) Free or Nominal Rate Distribution Outside the Mail (Carriers or other means): 11,105
    - e. Total Free or Nominal Rate Distribution (Sum of 15d (1), (2), (3), and (4)): 92,196
    - f. Total Distribution (Sum of 15c and 15e): 662,952
    - g. Copies not Distributed (See Instructions to Publishers #4 (page #3)): 98,274
    - h. Total (Sum of 15f and g): 761,226
    - i. Percent Paid (15c divided by 15f times 100): 86.1%
- No. of Copies of Single Issue Published Nearest to Filing Date:
  - a. Total Number of Copies (Net Press Run): 685,719
  - b. Paid Circulation (By Mail and Outside the Mail):
    - (1) Mailed Outside-County Paid Subscriptions Stated on PS Form 3541 (Include paid distribution above nominal rate, advertiser's proof copies, and exchange copies): 499,060
    - (2) Mailed In-County Paid Subscriptions Stated on PS Form 3541 (Include paid distribution above nominal rate, advertiser's proof copies, and exchange copies): 0
    - (3) Paid Distribution Outside the Mails Including Sales through Dealers and Carriers, Street Vendors, Counter Sales, and Other Paid Distribution Outside USPS: 12,755
    - (4) Paid Distribution by Other Classes of Mail Through the USPS (e.g., First-Class Mail®): 0
  - c. Total Paid Distribution (Sum of 15b (1), (2), (3), and (4)): 511,815
  - d. Free or Nominal Rate Distribution (by Mail and Outside the Mail):
    - (1) Free or Nominal Rate Outside-County Copies included on PS Form 3541: 72,863
    - (2) Free or Nominal Rate In-County Copies included on PS Form 3541: 0
    - (3) Free or Nominal Rate Copies Mailed at Other Classes Through the USPS (e.g., First-Class Mail®): 0
    - (4) Free or Nominal Rate Distribution Outside the Mail (Carriers or other means): 3,151
  - e. Total Free or Nominal Rate Distribution (Sum of 15d (1), (2), (3), and (4)): 76,014
  - f. Total Distribution (Sum of 15c and 15e): 587,829
  - g. Copies not Distributed (See Instructions to Publishers #4 (page #3)): 97,890
  - h. Total (Sum of 15f and g): 685,719
  - i. Percent Paid (15c divided by 15f times 100): 87.1%
16. Not applicable
17. Publication of Statement of Ownership: If the publication is a general publication, publication of this statement is required. Will be printed in the Nov. 10, 2025, issue of this publication.
18. Signature and title of editor, publisher, business manager, or owner: Robert Foppiani, Executive Vice President, Finance; Date: Oct. 01, 2025.

I certify that all information furnished on this form is true and complete. I understand that anyone who furnishes false or misleading information on this form or who omits material or information requested on the form may be subject to criminal sanctions (including fines and imprisonment) and/or civil sanctions (including civil penalties).

# The View

SOCIETY

## MACHINE LOVING

BY MYISHA BATTLE

Many modern relationships start with a phone notification—a text from the stranger from last night, a delightful chime that you’re a match, a haptic vibrating your hand. Daters are using ChatGPT and Claude to craft their profiles and witty messages. People are even skipping human dating altogether in favor of AI. It’s fair to say our romantic relationships are becoming dependent on our use of technology. ▶

INSIDE

AI FAKES MAY RENDER  
SOCIAL MEDIA OBSOLETE

KENYAN DEMOCRACY AFTER  
THE PASSING OF ITS CHAMPION

WHAT I LEARNED  
IN CONVERSION THERAPY

The term *digisexual* was coined in 2017 to identify those whose primary sexual experiences are mediated by technology, meaning they prefer tech-based sex as opposed to flesh-based sex. By that definition, there's a growing number of digisexuals out in the dating scene.

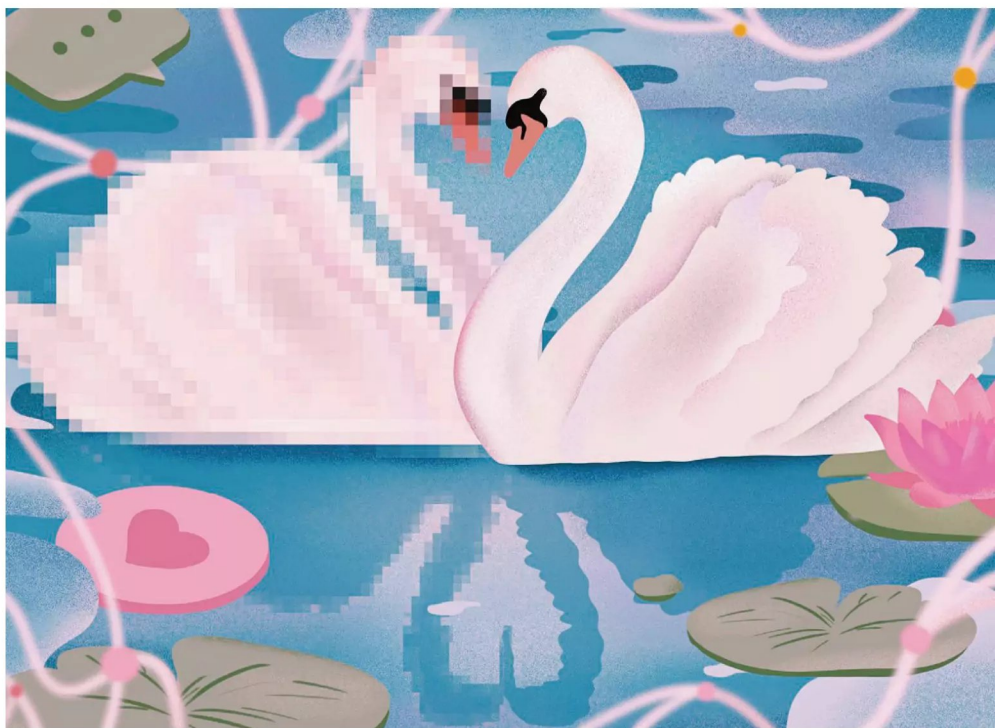
According to a 2023 Pew Research Center report, 30% of U.S. adults, and 53% under the age of 30, have used a dating site or app. Interestingly, only 10% of partnered people polled met in this way. That means that many daters who use apps are engaging with this technology without seeing the results that they signed up for. Of course, not everyone wants a relationship, but according to surveys conducted by Tinder, the most-used dating app in the country, the majority of daters do.

As a result, many daters are frustrated by their relationships with the apps. In fact, those relationships are often the only ones they get from dating online.

Another phenomenon I'm seeing more and more often is people who would rather text, video call, and engage with their matches through social media than ever meet in person. Only after weeks, months, or sometimes over a year of tech-based communication will some of my clients realize they should meet their connection in person.

Technological encroachment on your love life doesn't end with dating. We use technology to keep in touch, plan dates, send romantic missives, and sext. There are apps designed to help you build a bond by asking you and your partner about yourselves, then sharing your responses. Some apps help you learn the best ways to please yourself and your partner in bed, while others promise deeper conversations through helpful prompts. There are apps for chore wheels, therapy, mindfulness, relationship coaching, and pretty much anything else you need help with.

We even use tech as a way to judge compatibility. I've had clients who really struggled with how the person they were dating communicated with them digitally. In fact, it's a common complaint that face-to-face



interactions are great, but the person's texting style or pace of communicating digitally is less than ideal. In some cases, this mismatch was enough for the relationship to end. In others, it was cause for conversations and either a compromise or acceptance.

And then there's technology we use for our intimate lives. Sending nudes that disappear is an option on several messaging apps, and if you want to know what you and your partner have in common sexually, there's an app for that too.

**A QUARTER OF YOUNG ADULTS** believe AI has the potential to replace human romantic relationships, according to the Institute for Family Studies. Of the people most in favor of AI relationships, heavy porn users are at the top. We're already seeing how chatbots that weren't designed for this purpose are being used as romantic partners. Several AI companies have sprung up to meet the demand for AI partners. And on Oct. 14, OpenAI announced that ChatGPT is getting in on the game: starting in December, CEO Sam Altman said in a post on X, "as part of our 'treat adult users like adults' principle, we will allow even

more, like erotica for verified adults."

But tech-based "solutions" that completely smooth out the necessary friction of living and growing through the natural course of a relationship are not a sustainable solution for society's romantic frustrations. So much of the benefits of partnership come from moments of disagreement and conflict resolution—that's when you learn the most about yourself and your partner. Most AI chatbots are made to be agreeable and cater to your every need, which isn't how typical romantic partnerships work.

So many of us believed that technology could enrich our lives, but never thought that it would take up so much space in our relationships. Arriving at our digisexual reality has been a slippery slope from app to bot that we never saw coming.

Now that awareness of these trends is on the rise, will we consciously allow technology to continue to shape our relationships? And will the next wave of tech make us even more dependent on it for love?

*Battle is a certified clinical sexologist and sex and dating coach, educator, and speaker*

OPENER: ILLUSTRATION BY SOL COTTI FOR TIME; IN THE LOOP: PHOTO-ILLUSTRATION BY CHLOE SOWLING FOR TIME; SOURCE IMAGE: TIM ROBERTS—GETTY IMAGES



## In the Loop

### By Andrew R. Chow

TECH CORRESPONDENT

IN OCTOBER, HEART-WRENCHING photos of a 12-year-old girl driving her sick puppy to the vet went viral on social media. But upon closer examination, users noticed strange details: her steering wheel was on the right side of the car, which also lacked a dashboard.

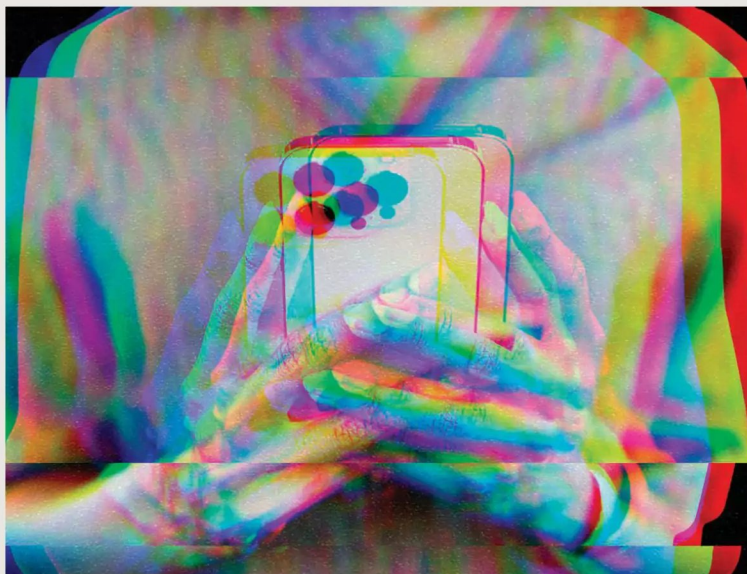
The image, perhaps predictably, was another example of AI slop: artificial content designed for no reason other than maximum engagement on social media. **An increasing amount of AI slop is now churning through social media thanks to the arrival of Sora 2, OpenAI's new text-to-video model.** The tool, which quickly shot to the top of the App Store, allows users to describe a scene, and then renders it within seconds.

While OpenAI CEO Sam Altman hopes the videos will “feel fun and new,” critics see them as a potential death knell for social media. What was supposed to be a revolutionary medium for maintaining friendships and relationships has now become a fake-content-generation machine—where it’s impossible to tell what is and isn’t real. “The irony is that AI might end up saving human connection because they’re making us so desperate for that real thing,” says Kashyap Rajesh, a vice president at the youth-led organization Encode.

**REALISTIC AI-GENERATED IMAGES** and videos are a major goal for every major AI lab. AI leaders hope that

users will be able to create music videos, movies, and advertisements quickly and cheaply, spurring a new age of creativity. Some also believe video models are the key to ushering in artificial general intelligence, or AGI, that understands physics perfectly, and thus can move seamlessly through the world.

In order to hone their models, these companies need users to create large amounts of content that can be used for training data. This



year alone, Meta has released a dedicated AI video feed called Vibes; Google released Veo 3; and Bytedance released Seedance. These apps can be viewed as part of a larger flywheel: mainstream usage simultaneously improves the products.

As a result, many users are now enjoying AI videos of talking gnomes, or Tupac Shakur boxing the Pope. But Rajesh argues that realistic AI videos will threaten our shared understanding of reality, and make it extremely cheap and easy to

run disinformation and misinformation campaigns. While Sora videos come with watermarks signifying their provenance, tools have already been created to either add or remove them, sowing confusion. “It kind of creates this low-level paranoia within people that kills the spontaneity and magic of social media to begin with,” Rajesh says.

Ben Colman, the CEO of Reality Defender, conducted a security experiment and found that he was able to use Sora to forge AI impersonations of prominent people—and then “authenticate” them as if they originated from the celebrities themselves. He also worries AI will exacerbate divisive content. “The

platforms are effectively marketplaces for attention,” he says. “It creates this infinitely more polarizing echo chamber of giving mass-market consumers what they need to become more extreme in all things.”

Some people are growing so disenchanted, they are renouncing their phones altogether. Earlier this year, educator Grant Besner co-organized a program in D.C. called Month Offline, in which participants are encouraged to turn off their smartphones for

a month and interrogate their relationships with the devices they have become addicted to.

He says that Sora 2 and hyper-realistic video “may be the breaking point where humans kind of reclaim some of their agency and say, ‘You know what, this whole frictionless way of relating to information and to each other and to ourselves maybe isn’t producing better outcomes.’”



For a twice-weekly deep dive into the AI revolution, sign up at [time.com/intheloop](https://time.com/intheloop)



## The Risk Report

### By Ian Bremmer

CONTRIBUTING EDITOR

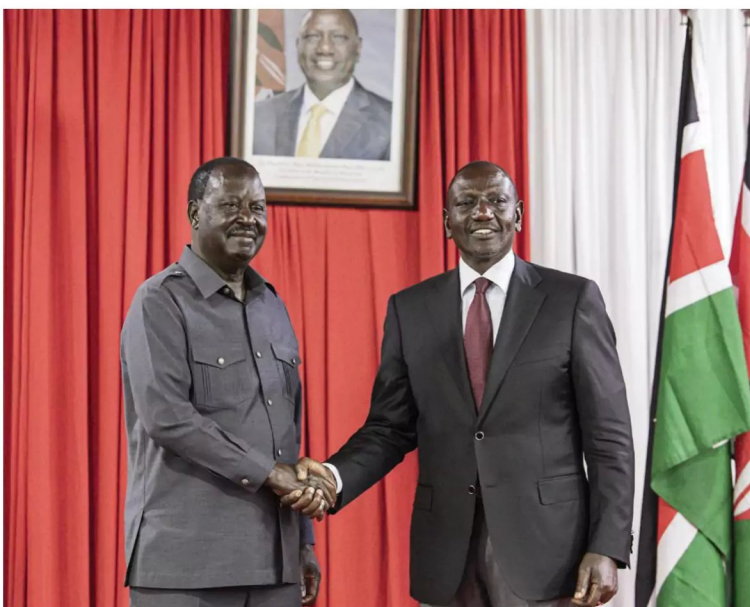
WHEN FORMER PRIME MINISTER, champion of multiparty democracy, and longtime opposition leader Raila Odinga died on Oct. 15, Kenya lost the country's most consequential figure of the past generation. Odinga, who served prison time for his steadfast support for democracy and political reform, played a critical role in replacing a colonial-era charter with the country's current constitution, which imposes clearer limits on presidential power. He ran for President and lost five times, but in the 2022 election, he won the majority of the vote in all but two regions, thanks to his ability to build a strong following outside his regional and Luo ethnic base.

Odinga wasn't just a star of the past. His ability to hold the loyalty of one of Kenya's largest and most diverse voting blocs; to unify the opposition Orange Democratic Movement (ODM), a center-left outfit; and to organize protests—and use them to win concessions from government—kept him a central political player.

**Odinga's recent coalition with President William Ruto bolstered Kenya's political stability at times when a return to the political violence of the past seemed possible, and his death now leaves Ruto in a much more vulnerable position.** The ODM holds the second largest share of seats in Kenya's parliament, and Odinga was the leader who decided most of the party's policy positions on legislative issues. Ruto needed Odinga's control of these votes to advance his agenda. Ruto responded to Odinga's death by declaring a seven-day period of "mourning

and deep reflection" in honor of "Odinga's extraordinary contribution to our nation."

**ODINGA'S DEATH LEAVES** a large political vacuum. He had led the ODM since its creation in 2005 and had served as the party's presidential candidate in every general election it contested. But senior members of the ODM opposed his alliance with Ruto—even as they joined his broad-based Cabinet—and continued to criticize



Odinga, left, joined forces with Kenyan President Ruto

the President despite the coalition. Many party leaders argued openly that Ruto's flagging popularity gave the ODM a rare opportunity to peel away some of Ruto's backers, but Odinga managed to keep the coalition intact.

Younger ODM members who helped organize last year's Gen Z protests—some of the biggest anti-government demonstrations since democracy was restored in the 1990s—denounced Odinga's cooperation with Ruto as an act of political betrayal. These youth protesters oppose the Ruto government over living

standards, often blatant government corruption, and its heavy hand toward demonstrators.

Odinga's passing has opened the door to intense debate within the ODM over whether, when, and how the party might abandon Ruto ahead of Kenya's 2027 presidential election. On Oct. 16, the party chose Odinga's 82-year-old brother as its interim leader, but no single figure within the ODM looks able to unite its members around a strong legislative and political strategy.

It's not just the ODM's way forward that remains unclear. Would-be Presidents across the country know that success in the 2027 election will depend on winning over Odinga's supporters. Ruto hoped that Odinga's endorsement of him to serve another five-year term would help him lock down re-election in 2027, and opposition leaders had tried to pull Odinga into their camps. Unfortunately for all, the lack of any unifying figure within the ODM could simply fragment Odinga's base as a bitter leadership fight within the party divides it into factions.

The good news for Kenya is that at least in the near term, the dangerous political unrest we've seen in the past remains unlikely. Following a funeral in Odinga's home region, tensions will run high, but even in a country where police brutality remains a hot political issue, Ruto's need to keep the ODM within the governing coalition for as long as he can reduces the threat that confrontations between police and mourners will turn violent.

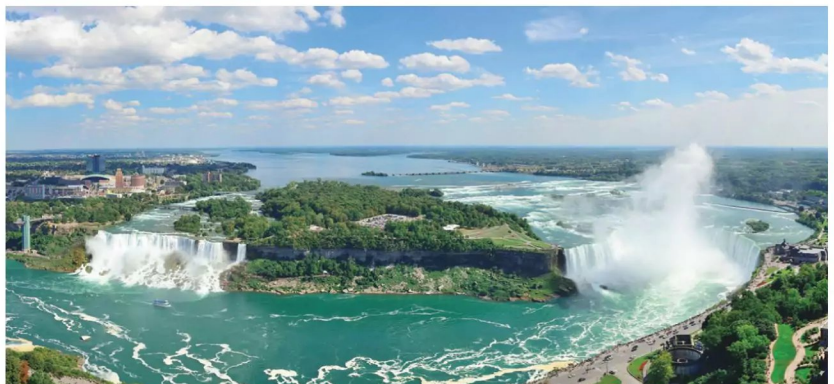
Still, Kenya's longer-term political outlook just got a lot murkier, as the scramble to win over Odinga's supporters will intensify in the months ahead. With so many governments today led by strongmen—or would-be strongmen—in Africa and beyond, Odinga's passing is a landmark loss. □



*Discover The Treasures Along*  
**THE GREAT LAKES**

In the comfort of our well-appointed fleet, enjoy the most personalized exploration of the Great Lakes region on a 7 to 15-night journey. Led by our engaging local guides, immerse yourself in the rich history and vibrant culture of charming harbor towns and admire the wonders of nature up close.

**Explore Well™**



Call for a  
**FREE** Cruise Guide

**888-594-9673**

[PearlSeasCruises.com](http://PearlSeasCruises.com)

SOCIETY

## My eight years in conversion therapy

BY TIMOTHY SCHRAEDER RODRIGUEZ

WHEN I FIRST STARTED CONVERSION THERAPY AT AGE 19, I thought I was pursuing healing for what I was led to believe was broken in me. I didn't want to erase myself. I wanted peace. I wanted to stop feeling like my faith and my sexuality were at war with one another. I sought it out of my own accord. My parents and pastors didn't force me into therapy, but everything in the culture around me convinced me it was my only option.

Conversion therapy sells a promise of transformation, but what it really delivers is a slow disintegration of the soul. You learn to measure your worth by how well you can pretend. You learn to call shame devotion. And you learn that love has conditions.

I was in conversion therapy for nearly eight years. I was taught to artificially deepen my voice, second-guess my every action, and replace my hobbies and interests with more "masculine" ones. My life became all about being faithful and doing everything I could to become like the man I was told God wanted me to be. Ministry leaders, therapists, and pastors prayed over me. They said I was brave. And when nothing changed, they said I was the problem. So I prayed harder and tried to fake it until I made it.

The irony was that this performance followed me into my career. I worked for some of evangelical Christianity's largest megachurches, like Hillsong, Willow Creek, and Elevation Church, where I helped craft messages of belonging for millions. But my presence in these spaces operated by unspoken rules: I was useful in the shadows, but unacceptable in the light. I was selling the idea of love and acceptance while practicing self-exclusion.

For almost a decade, I did individual therapy, attended conferences, joined support groups, and listened to testimonies from people who claimed they had changed their sexuality with God's help. I told myself I could too, if I just had enough faith. I was told repeatedly that the opposite of homosexuality wasn't heterosexuality, it was holiness, and I strove to meet that impossible standard.

But the truth was that the more I tried to heal, the further I drifted from myself. My prayers became bargains. My faith became a performance. I started to believe that peace might exist only if I ceased to.

It took years for me to understand that what they were calling healing was really a kind of harm. The turning point came when I finally recognized God's failure to answer my prayers to make me straight was, in fact, the answer. I had to stop seeking a miracle that was never going to come, and start acknowledging that I had been worthy all along. This was the difference between chasing holiness and choosing wholeness. Healing meant embracing the self I had spent



^  
The author  
outside the  
U.S. Supreme  
Court on Oct. 7  
as it heard oral  
arguments

almost a decade trying to bury.

In 2013, Exodus International, the largest network of conversion ministries in the world, shut down and apologized for the harm it had caused. Its president admitted that few people had ever successfully changed their sexuality. But the ideology behind it never died. It lives on under new names, in new churches. And now the U.S. Supreme Court is deciding *Chiles v. Salazar*, in which a Christian therapist in Colorado argues the prohibition against conversion therapy violates her First Amendment free-speech rights.

When we talk about conversion therapy, the debate often centers on whether counselors should be free to say what they believe, or people free to seek whatever help they want. But freedom without truth isn't freedom, it's confusion. And there's nothing free about being taught that the only way to be loved is to stop being yourself.

The arguments against conversion therapy aren't about attacking religion or silencing free speech. They're about safeguarding children.



**It teaches people to doubt their own goodness**

People of faith will always be free to seek guidance consistent with their beliefs, and churches can still provide pastoral support. What's at stake here is whether states should endorse practices that every major medical and mental-health association has already disavowed as dangerous and ineffective.

According to the Trevor Project's 2023 report, more than 1,300 practitioners in 48 states and the District of Columbia continue to offer licensed or unlicensed forms of conversion therapy to minors. That means millions of young people remain vulnerable to a practice the nation's leading experts have long rejected as both harmful and scientifically baseless.

Freedom of religion doesn't mean freedom to cause harm under the banner of care. Pastoral and spiritual care are sacred in their own way. Licensed psychological care serves a distinct purpose and adheres to a higher standard. We can't blur those lines. Prayer and pastoral counseling have their place in religious communities. But when a licensed therapist uses the authority of medicine to validate the

idea that queerness is a disorder that can be fixed, it's malpractice. States regulate professional mental-health care so "help" never becomes harm.

Some people say bans on conversion therapy take away choice. I understand why that sounds persuasive. But a choice made under shame and spiritual fear isn't autonomy, it's about survival. When a young person has been told for years that God will love them only if they change, consent isn't free. It's coerced by the culture that raised them.

**AS I LISTENED** to the arguments from both sides in *Chiles v. Salazar*, I couldn't help but think about that version of myself. I wasn't a child when I walked into that office, but I was still young and afraid and shaped by years of teaching that told me God would love me only if I changed. I thought I was choosing therapy. What I was really choosing was survival in a world that had convinced me I didn't deserve to exist as I was. I took on shame and self-hatred disguised as faithfulness.

The harm isn't abstract. Youth who experience conversion therapy are almost twice as likely to attempt suicide. I remember what conversion therapy did to me. It taught me to mistrust my own heart. Even now, years later, I sometimes flinch at joy, second-guess love, and brace for punishment when life feels too good. That shame eventually led me into addiction.

The danger of conversion therapy isn't just the trauma it causes. It's that it disguises shame as healing. It teaches people to doubt their own goodness. It tells them peace is possible only if they become someone else.

Real healing isn't about erasing what's wounded. It's about telling the truth about where it hurts. That truth didn't come easy for me. I had to rebuild a faith that could hold my full humanity. I had to learn that love and shame cannot exist in the same space. I had to believe that God's love was bigger than the box I'd been told to fit it inside.

When I finally stopped trying to be someone else, something shifted. The peace I had been praying for didn't come from perfection. It came from honesty. I finally felt a true sense of belonging in a community that celebrated the fullness of who I was.

We live in a culture obsessed with fixing things. We treat discomfort as a disease. But our sexuality, identity, and capacity for love were never meant to be cured. Conversion therapy taught me that anything built on shame will always collapse. Real healing comes when we stop apologizing for who we are and start believing that we were never broken in the first place. And healing, I've learned, isn't becoming who others tell you to be. It's having the freedom to become the person you were meant to be all along.

As the Justices debate the case before them, I hope they remember that there are people behind those words, people like the 19-year-old I once was, who mistook fear for faith and control for care. What I needed then wasn't the freedom to change. I needed the freedom to be myself.

*Rodriguez is the author of the forthcoming book Conversion Therapy Dropout*



*The President in the  
Oval Office on Oct. 21*

PHOTOGRAPHS BY STEPHEN VOSS FOR TIME

SPECIAL REPORT

MIDDLE EAST

**HOW  
THE  
DEAL  
GOT  
DONE**

Inside Trump's  
unconventional Middle  
East diplomacy

**BY ERIC CORTELLESA**

## On the evening of Saturday, Oct. 4, Donald Trump called Benjamin Netanyahu to deliver a message: the war in Gaza was over.

Trump's envoys had brokered a deal with mediators from Qatar, Egypt, and Turkey to end two years of bombardment and bloodshed. The following Monday, the President told Netanyahu, they were going to announce the agreement—and the Israeli Premier had to accept it. “Bibi, you can’t fight the world,” Trump told him, recounting their conversation in an interview with TIME. “You can fight individual battles, but the world’s against you.”

Netanyahu pushed back, but Trump wasn’t having it. He launched into a profanity-laced monologue cataloging all he’d done for Israel as President: moving the U.S. embassy to Jerusalem, recognizing its sovereignty over the Golan Heights, brokering the Abraham Accords that normalized relations between Israel and several Arab states, even joining Israel’s strikes on Iran in June. Trump could no longer stand with Netanyahu, he suggested, if the Prime Minister didn’t sign on to the pact. “It was a very blunt and straightforward statement to Bibi,” says Steve Witkoff, Trump’s special envoy to the Middle East, “that he had no tolerance for anything other than this.” (Netanyahu’s office declined to comment.)

By the end of the call, Netanyahu had agreed to a two-phase deal that included a cease-fire between Israel and Hamas, secured the return of Israeli hostages in exchange for Palestinian prisoners and detainees, allowed aid shipments into the ravaged enclave, withdrew Israeli forces from parts of the Gaza Strip, and opened negotiations for a final settlement. If it holds, the accord would end the longest war in Israel’s history, one that killed some 2,000 Israelis and nearly 70,000 Palestinians.

The deal marks a milestone in Trump’s ongoing bid to reshape the modern Middle East. During the past nine months, the President has attacked Iran’s nuclear infrastructure and helped degrade its standing in the region. Isolating Tehran hastened the fall of the Assad regime in Syria, and new governments in Damascus and Beirut have signaled a desire to restore ties with Washington. He has bombed Houthi targets in Yemen, leading to an agreement that the rebel group would no longer target U.S. vessels in the Red Sea. Now he has used a real estate dealmaker’s sensibility—an instinct for leverage, for cajoling counterparts through flattery and the threat of force—to push a peace deal on Hamas and Netanyahu, two seemingly intractable enemies. The U.S. President is “breaking all the long-held assumptions of Middle East diplomacy,” says Michael Oren, the historian and former Israeli ambassador to the U.S. “Trump is coming back and saying: We’re going to re-establish America’s hegemony here. And he’s done it—so far.”

Trump traces his achievements so far to his willingness to use America’s military might. Through the assassination

of the Iranian general Qasem Soleimani in his first term and his decision to strike three Iranian nuclear facilities last spring, Trump earned enough goodwill among the Israeli public and stirred enough fear among the nation’s adversaries to bring both parties to the bargaining table. “It would have been impossible to make a deal like this before,” Trump says of his attacks on Iran. “No President was willing to do it, and I was willing to do it. And by doing it, we had a different Middle East.”

Of course, the cease-fire remains fragile, and the deal could still unravel. Hamas has yet to return the remains of all the deceased Israeli hostages, prompting Israel to close the Rafah crossing and restrict aid. Videos on social media show Hamas gunmen executing rivals in the streets. On Oct. 19, Israel accused the militant group of violating the cease-fire after attacks on Israeli soldiers. In the span of a week, the situation grew precarious enough that Trump dispatched Vice President J.D. Vance to the region in a bid to hold the agreement together.

The next phase is even thornier. It includes defining the scope of Israel’s military withdrawal and the structure of a peacekeeping force; disarming Hamas; and determining who will govern postwar Gaza. “Those are very difficult things to do,” says Dan Shapiro, the former U.S. ambassador to Israel under Barack Obama. Among the risks, Shapiro says, is that Trump could “end up with kind of a frozen conflict in the current situation, with Israel controlling half of Gaza, Hamas controlling the other half, suppressing its own people, and no real reconstruction.”

For those reasons, experts fear the peace may prove fleeting. But Trump’s foreign policy has also defied the predictions of his critics. His “America First” creed—once synonymous with isolationism and retreat—has evolved into an unconventional form of personalized diplomacy unburdened by doctrine. While he has shown himself content to let Russia have greater dominance over Europe and China exert its will in the Indo-Pacific region, he has asserted U.S. power in the Middle East in surprising ways. Trump has deepened Washington’s ties with Riyadh, Abu Dhabi, and Doha. He expects Saudi Arabia to normalize ties with Israel and join the Abraham Accords by year’s end. He tells TIME he intends to visit Gaza soon, as U.S. partners hammer out a plan to reconstruct the Strip. Soon he envisions greater economic integration between Israel and its Arab neighbors. The bullish vision of what all this could mean would be transformative: rail lines from the Mediterranean to the Persian Gulf; free-trade agreements between Israel and its neighbors; the establishment of a new regional energy grid; Saudis vacationing in Tel Aviv.

In Trump’s telling, this regional reset would be impossible without one essential ingredient: himself. “The most important thing,” he tells TIME, “is they have to respect the President of the United States. The Middle East has to understand that. It’s almost the President more than the country.”

**TRUMP WAS EN ROUTE** to Charlie Kirk’s funeral on Sept. 21 when he summoned his top aides and allies to his private cabin aboard Air Force One. Gathered around the table were



Trump with world leaders Oct. 13 during a visit to Sharm el-Sheikh, Egypt, to mark the deal

his chief of staff Susie Wiles, House Speaker Mike Johnson, and his son-in-law Jared Kushner. Witkoff was patched into the conversation by phone.

The group had a problem to deal with. Hours earlier, Israeli warplanes had struck Hamas operatives in Doha, who were visiting a compound to discuss cease-fire negotiations. The attack violated the sovereignty of Qatar, a U.S. ally and the chief mediator with Hamas. The assault enraged Trump. “That was terrible,” Trump says now, calling the decision “a tactical mistake” on Netanyahu’s part. Yet for U.S. negotiators, it also represented an opportunity. The assault was a warning to Arab leaders that the war in Gaza would not stay confined there.

Trump, meanwhile, saw a chance to use outrage over the attack to coax regional leaders to the table. “This was one of the things that brought us all together,” Trump says. “It was so out of joint that it sort of got everybody to do what they have to do. If you took that away, we might not be talking about this subject right now.”

The President’s approach to the region took shape in his first term. He entered office without foreign policy experience. He handed the Middle East portfolio to Kushner, his son-in-law and a fellow real estate developer, who approached the matter less as a traditional diplomat than as a dealmaker. When Trump followed through on his campaign vow to recognize Jerusalem as Israel’s capital and move the U.S. embassy there, the Palestinians broke off contact with Washington. That rupture gave rise to a new approach to

the long-standing Israeli-Palestinian conflict. Rather than accept the conventional wisdom that Israel could not integrate with the Arab world without first making peace with the Palestinians, Trump’s team sought to flip the formula. They called it the “outside-in” strategy: build peace from the periphery inward.

During the 2024 campaign, Trump was in touch with Netanyahu. The Israeli Prime Minister visited him at Mar-a-Lago that July. It was an open secret that Netanyahu was rooting for Trump’s return to the White House as President Joe Biden pressured him to halt the onslaught on Gaza. But Netanyahu’s relationship with Trump was fraught as well. Trump left office furious at the Israeli leader—first for withdrawing from a planned 2020 joint strike on Soleimani (a claim Israel has denied), and later for becoming one of the first world leaders to congratulate Biden on his election victory in 2020. Netanyahu was eager for a rapprochement.

When TIME brought up Israel’s attacks on Hezbollah and regime change in Syria, the President interrupted. “All of those attacks were done under my auspices, you know, with Israel doing the attacks—with the pagers and all that stuff.” He was referring to Israel’s covert operation in September 2024 that targeted Hezbollah officials by detonating thousands of pagers, killing dozens and inflicting a psychological scar on the terrorist group for succumbing to such a sophisticated security breach. Biden was still in the White House, and Trump was a candidate. “They let me know everything,”

he says. “And sometimes I’d say no—and they’d be respectful of that.” (A Biden representative declined to comment. A Trump spokesperson later said the President misspoke and was referring to Israel’s recent strike on Doha.)

After Trump won in November 2024, Witkoff traveled to Washington to meet with key members of Biden’s foreign policy team: National Security Council coordinator for the Middle East Brett McGurk, National Security Adviser Jake Sullivan, and Secretary of State Antony Blinken. Constrained by the Logan Act’s restrictions on private citizens negotiating foreign policy, Witkoff secured approval from the Biden team to hold talks with Israeli and Arab interlocutors. Even as the Biden Administration continued its own diplomacy, a new sense of possibility had begun to take hold. “ Hamas was signaling that they wanted to gain some political capital with the Trump Administration,” Witkoff told me. “Beyond political capital, they were afraid of him.”

The day before Trump’s second Inauguration, Israel and Hamas agreed to a cease-fire, and Hamas released 33 hostages. But the fighting resumed in short order. Trying to keep talks on track, Trump had invited Netanyahu to the White House in February, when he proposed relocating Gaza’s population and remaking the Strip into “the Riviera of the Middle East.” Experts say the outlandish idea galvanized Arab negotiators and regional mediators to expedite a peace process. “The President scared the hell out of them when he came up with the Riviera idea,” says Nimrod Novick, a former senior adviser to Israeli Prime Minister Shimon Peres and now a fellow with the Israel Policy Forum. “Never mind the Riviera, but for them to host 2 million Gazans for the duration of reconstruction or beyond was unthinkable on several grounds.”

The theater of conflict soon expanded. Israeli forces struck Iran’s nuclear facilities in June, unnerving a White House that feared the bombing campaign would derail its efforts at diplomacy. Yet Netanyahu, through careful planning, was able to enlist Trump to join the campaign, according to a senior Israeli official who spoke on condition of anonymity because he was not authorized to discuss the conversations.

At their meeting in February, Netanyahu had agreed to give Trump a 60-day window to engage in talks with the Iranians on a nuclear agreement, expecting that they would prove fruitless, according to an Israeli official familiar with the matter. When they produced no resolution, Netanyahu launched the attack. At first, a White House official says, Trump was frustrated—the offensive jeopardized the Administration’s hopes of a nuclear deal with Tehran. But Trump warmed to the idea of joining the strikes, seeing their impact and concurring with Netanyahu’s assessment that the Iranians were trying to manipulate him. On June 22, Trump unleashed U.S. bunker-buster bombs that crippled Iran’s nuclear infrastructure, according to U.S. and Israeli officials.

Then Netanyahu targeted Hamas leaders in Doha. The assault provoked a crisis that Kushner and Witkoff were

determined not to waste. “We had an opening,” Kushner says. “It’s just an element of how the President thinks.” The pair worked the U.N. General Assembly circuit, hashing out a 20-point plan with Qatari mediators, Egyptian and Turkish interlocutors, and Israeli officials. The proposal called for an immediate cease-fire and hostage exchange, Israeli security guarantees, the demilitarization of Gaza, and a new civilian governing authority.

When the document reached the President, he scheduled a meeting with leaders of Arab states in a large room at the U.N. on Rosh Hashanah. Joined by Witkoff, Wiles, and Secretary of State Marco Rubio, Trump began the session, U.S. officials say, with a long soliloquy about ending the killing and achieving a lasting peace, the goal that has eluded statesmen since the founding of Israel. Then he went around the table, soliciting each leader’s counsel. Prince Faisal, representing the Saudi Crown Prince Mohammed bin Salman, and King Abdullah of Jordan voiced support for the framework.

The negotiations picked up steam from there. Regional leaders, including the Turks and Qataris, helped lean on Hamas. Turkey, a member of NATO, provided a boost

by offering Hamas’ political leaders protection from Israeli strikes if they came to the table, says Soner Cagaptay, a Turkish scholar at the Washington Institute for Near East Policy. “Turkey has quite a bit of sway over Hamas’ political wing,” he says, “and I think Ankara used that influence.”

Trump applied pressure too, warning that if the militant group refused to disarm or attempted to subvert the deal, it would face “complete obliteration.” The demand was clear: the return of every Israeli captive, no longer in stages. “I said, ‘No more of that. You’re giving us the f-cking hostages, all of them,’” Trump says.

The threat drew credibility from the recent strikes on Iran. “The real clincher was Trump’s willingness to use military force,” says Oren. “The previous Democratic administrations were very averse to using military force. They preferred soft power. Soft power is not widely respected in the Middle East.”

Trump’s popularity in Israel—where his approval ratings dwarfed the Israeli Premier’s—gave him leverage over Netanyahu. He knew to embrace Netanyahu in public while pressuring him in private to halt the fighting, aides say. “He would have just kept going,” Trump tells TIME. “It could have gone on for years. It would have gone on for years. But I stopped him, and everybody came together when I stopped him.”

**THAT MUCH MAY BE TRUE**, but Israelis and Palestinians alike understand that the success of Phase 2 will depend on Trump’s willingness to stay engaged—on his leverage with Netanyahu and his influence over the region’s key players. “If the guarantors of this process want it to succeed, it will succeed, particularly the Trump Administration,” says Khaled Elgindy, a former Palestinian Authority negotiator.

But there are also ways, he adds, that the pact could crumble. One question is the extent to which an

## ‘IT’S ALMOST THE PRESIDENT MORE THAN THE COUNTRY.’

—DONALD TRUMP

international peacekeeping force will allow the Palestinians to choose their own future governance. Israelis and other Arab powers insist Hamas cannot play a role. But the Islamist group, which the U.S. classifies as a terrorist organization, is “not going to negate itself as a political movement,” Elgindy says. “I don’t think folks in Israel are open to any kind of Hamas participation in anything going forward, and that even if Hamas consents to a technocratic government, they will see that as illegitimate.”

Trump himself may care little about the specifics of Gaza’s postwar order so long as he can claim credit as a peacemaker. But it is difficult to negotiate when there is no unified Palestinian leadership, a dynamic Netanyahu spent decades cultivating by keeping Hamas in Gaza and the Fatah-led Palestinian Authority in the West Bank divided. “They don’t have a leader right now,” Trump tells me. “At least a visible leader. And they don’t really want to, because every one of those leaders has been shot. It’s not a hot job.”

Trump says he likes Mahmoud Abbas, the aging head of the Palestinian Authority, but suggests it’s unlikely he would be the right person to lead postwar Gaza. One option is calling on Israel to release Marwan Barghouti, the imprisoned Fatah leader who has spent more than two decades behind bars for allegedly directing the murder of four Israelis and one Greek Orthodox monk during the second intifadeh. “I was literally being confronted with that question about 15 minutes before you called,” Trump says. “So I’ll be making a decision.” Many regional observers believe Barghouti is the only figure capable of uniting the Palestinians; polls show him as a leading candidate in a hypothetical election for President of the Palestinian Authority.

Netanyahu, meanwhile, faces rebellion from right-wing ministers who want to block a path to Palestinian statehood and annex the West Bank. Trump warns such a move would meet fierce U.S. resistance. “It won’t happen because I gave my word to the Arab countries,” he told me. “Israel would lose all of its support from the United States if that happened.” Already,

#### LATIN AMERICA

## In the Americas, Trump inches toward war

BY REBECCA SCHNEID

On Sept. 2, President Donald Trump shared a grainy video of a U.S. missile strike against a boat carrying what he described as a group of “narcoterrorists” traveling in international waters from Venezuela. It was the first strike targeting Tren de Aragua, a cartel Trump designated a terrorist organization on his first day in office.

The campaign, launched without congressional approval against an ill-defined enemy and with little oversight, has already drawn comparisons to the long years of the “war on terror.” Defense Secretary Pete Hegseth made the analogy himself on Oct. 19, in a social media post: “The United States military will treat these [cartels] like the terrorists they are—they will be hunted, and killed, just like al-Qaeda.”

The war on terror blurred the lines between war and peace, and expanded executive power. Some who were involved in it believe these strikes could be even more legally questionable, and may again lead to the kind of “endless wars” Trump campaigned to finish.

“President Trump seems to believe that by simply designating them a terrorist group, that means that the U.S. can use force to kill them. But that was not the analyses of President Clinton, President Bush, or President Obama,” John Bellinger, who was a legal adviser for the State Department and National Security Council during the George W. Bush Administration, tells TIME. He argues Trump is acting on a “dangerous” logic. “We have the President using force against civilians,” he says. “They may be breaking narcotics laws, they may be criminals—but he has simply killed them without due process.”

Bellinger is not the only veteran of the war on terror to have raised concern. John Yoo, a former deputy assistant AG known for his role in shaping the legal basis for Bush’s war on terror policies, has been an outspoken critic of the strikes. “There has to be a line,” he said in a Politico interview, “between crime and war.”

But, much like the war on terror, the strikes now threaten to expand into something greater, as they edge into what the Trump Administration has called a “noninternational armed conflict.” The strikes now threaten to extend to any boat suspected of being related to the cartel or to Venezuela, which the White House accuses of backing the group, with little evidence.

For Trump, says Michael McCarthy, a lecturer at George Washington University’s Elliott School of International Affairs, Venezuela is “unfinished business” after his first term in office, when the Administration accused President Nicolás Maduro of working with cartels that traffic fentanyl-laced drugs to the U.S. McCarthy says the fight represents a “reboot of gunboat diplomacy in the Caribbean not seen for over a century.” The campaign also allows the Administration to pressure Venezuela to take back more undocumented immigrants from the U.S.

Rebecca Ingber, a professor at Cardozo Law School and a national-security expert who also previously served at the State Department, worries there is “no limiting principle” to Trump’s campaign, and believes Congress should “flex their muscles.” Senate Republicans, however, struck down a measure that would have blocked Trump from continuing assaults on unmarked boats.

“If he could do this on the high seas simply by calling these people terrorists and waving around that word, he could do it anywhere. And just consider who this Administration has called a terrorist,” Ingber says. In September, the Trump Administration designated the decentralized left-wing movement *antifa*, short for *antifascist*, a terrorist organization; in October, it issued a directive expanding domestic terrorism indicators to include a wide range of political beliefs, including anticapitalism and anti-Americanism.

“There are truly extreme risks of escalation here,” Ingber adds, noting the muted reaction to the strikes among much of the American public. “And more broadly, I think we’re just eroding the norms, I think we’re eroding the rule that is the backbone of the modern international law system that states may not use force except in the most narrow exceptional circumstances.” —*With additional reporting by Brian Bennett*

he has had to enforce the deal's terms, sending Vance to Israel to ensure that neither Netanyahu nor Hamas allow the agreement to unravel. Netanyahu briefly halted humanitarian aid to Gaza, citing Hamas' failure to return the bodies it had promised and its attacks on Israeli targets, while Vance, Kushner, and Witkoff pressed ahead with reconstruction talks to sustain momentum.

In the meantime, Trump's gaze has shifted beyond Gaza. He wants to expand the Abraham Accords, most dramatically through normalization between Israel and Saudi Arabia. The Saudis have placed two conditions on the table: an end to the fighting and a credible path toward Palestinian sovereignty, even if not necessarily full statehood. Trump believes both are within reach. "I think Saudi Arabia is going to lead the way," he says. "We don't have the Iran threat anymore. We don't have any threats anymore. We have peace in the Middle East."

Peace in the Middle East is, of course, a florid exaggeration. Yet Trump has achieved a cease-fire that returned the last living hostages to Israel and, for a moment at least, opened the door to a new chapter in the region. "Israel was so intent on the hostages, I was actually surprised," Trump says. "You would have thought they would have sacrificed the hostages in order to keep going, right? The people of Israel wanted the hostages more than they wanted anything else. And we got the hostages."

The question now is not only whether the fragile architecture of the deal will hold. It's whether Trump can sustain the kind of focus required to turn a momentary reprieve in the fighting into something lasting. It would require the kind of obsessive focus that Jimmy Carter brought to Camp David—long nights, endless details, a diplomacy of sheer endurance. When I ask whether the new regional dynamics can outlast him, Trump doesn't hesitate. "While I'm there, it's going to only get better and stronger, and it's going to be perfect," he says. "What happens after me? I can't tell you that." —*With reporting by SIMMONE SHAH* □





*The President in  
the Oval Office*



SPECIAL REPORT TAIWAN

# EDGE OF INVASION

Taiwan prepares as  
shadows of war creep  
closer to its shores

BY CHARLIE CAMPBELL



*Armored vehicles  
mobilize during a  
live-ammunition  
drill in Taiwan on  
July 14, 2025*

PHOTOGRAPH BY DANIEL CENG

## This is how the war will start.

During a highly charged presidential campaign, a bomb explodes, unleashing panic and a wave of recriminations. Then a Chinese Y-8 reconnaissance aircraft vanishes in Taiwan's eastern waters. Under the guise of search and rescue, Beijing deploys a massive air and naval force that quarantines the island. Reeling from forced sequestration, Taiwanese society suffers a deluge of propaganda and misinformation, pitting husband against wife, father against son. Political and financial interests foment infighting. By the time the first People's Liberation Army (PLA) troops arrive, the island has defeated itself.

On Aug. 2, people across Taiwan tuned in to this dystopian vision, which debuted on Taiwanese TV as the acclaimed drama *Zero Day Attack*, courtesy of showrunner Cheng Hsin-mei. Over 10 hour-long episodes, *Zero Day Attack* offers a forensic exploration of how a Chinese invasion of Taiwan could manifest, from the political and religious intrigue to media infiltration and economic manipulation. And while speculative fiction, *Zero Day Attack* is rooted in events already unfolding.

"If you go to the front lines, you can really feel the tension," Cheng says in her central Taipei office. "China is getting ready to do something."

Taiwan politically split from the mainland following China's 1945–49 civil war, and its "reunification" has been dubbed a "historical inevitability" by Chinese strongman Xi Jinping. The PLA regularly dispatches scores of warplanes close to the self-ruling island of 24 million, including a record 153 aircraft in a 25-hour period last October, in what Admiral Sam Paparo, head of the U.S. Indo-Pacific Command, told Congress were "dress rehearsals for forced unification."

"It is becoming more and more difficult to predict the possibility of the PLA turning an exercise into a real invasion," Taiwan Defense Minister Wellington Koo tells TIME. "This is the threat and challenge Taiwan faces."

The specter of war is difficult to reconcile with the care-free bustle of downtown Taipei, where on a cool June evening bickering families and doe-eyed couples throng the city's night markets as ever before. But the return of Donald Trump to the White House has injected an extra degree of anxiety over the island's future.

Few places are scrutinizing Trump's flip-flops over U.S. backing for Ukraine with greater apprehension than Taiwan, whose autonomy and cherished democracy have been underwritten by informal American backing. While the U.S. switched diplomatic recognition to the People's Republic of China (PRC) in 1979, Washington maintains a bevy of ties with Taiwan and is obliged by act of Congress to supply weapons needed for its defense. But Taiwan fears that the combination of Trump's diffidence for alliances and global acclaim as a war-ending "man of peace" may embolden Xi into finally completing the revolution started by the only

leader in modern Chinese history who's wielded similarly unchecked power: Mao Zedong.

Xi has described bringing Taiwan back into the fold as the "essence" of the country's "rejuvenation," which must be achieved by 2049, the 100th anniversary of the Chinese Communist Party's (CCP) five-starred flag first fluttering over Beijing's Forbidden City. "Taiwan will have to come back," one senior PLA officer tells TIME. "How can the strongest nation on earth not take back what it claims to be its own territory?"

In a May speech to the Shangri-la Dialogue security forum in Singapore, U.S. Defense Secretary Pete Hegseth said that Xi had "ordered his military to be capable of invading Taiwan by 2027"—a timeline first proposed by former U.S. Indo-Pacific Command chief Admiral Philip Davidson—though warned that an assault "could be imminent." In remarks that pointedly failed to dial down the temperature, Beijing responded by warning Washington "must never play with fire on [the Taiwan] question," which is "entirely China's internal affair."

Oriana Skylar Mastro, a professor and expert on China's military at Stanford University, notes that the tenor of her conversations with CCP and PLA officials has markedly changed in recent months. "Before they would say, 'We're so patient, there's nothing to worry about, Chinese people don't kill Chinese people,'" says Mastro. She was struck by "more inevitability" in discussions during her last visit to Beijing in May. "They would say, 'Why are you guys obsessed with 2027 when it can happen at any time?'"

If Xi is genuine in his desire to "complete the revolution," the question is whether he will ever have a better opportunity than before

Trump leaves office. He has vowed not to risk American lives in foreign wars, alienated allies with an internecine trade war, and culled the top China experts from policy circles. And for Xi, the clock is ticking. At home, young Chinese care more about scarce college-level jobs than reclaiming a sweet-potato-shaped island cast adrift before their parents were even born. Meanwhile in Taiwan, already minuscule support for reunification dwindles with every passing year.

There are impediments, of course. Invading Taiwan would be the most complex military operation in modern history, dwarfing even the D-Day landing of World War II, and must be coordinated by generals who have not waged a major war in over seven decades. Then there is the economic fallout from excising the world's top exporter of advanced semiconductors from global supply chains, which Bloomberg Economics estimates at \$10 trillion. That's some 10% of global GDP and far more than the shock from the war in Ukraine or the COVID pandemic.

So Taiwan is attempting to raise the cost of conflict. It has purchased billions of dollars of missile systems, fighter jets, and other defensive equipment from the U.S., while ramping up its indigenous defense industry with a focus on

**'If you go to the front lines, you can really feel the tension.'**

—CHENG HSIN-MEI

asymmetric warfare, such as drones and unmanned submersibles.

Compulsory national service has been extended from four months to a year for all young Taiwanese men. In September last year, President Lai Ching-te founded a Whole-of-Society Defense Resilience Committee to advise government departments regarding crisis management while also planning for disruption to critical infrastructure, supply distribution, and information and financial network protection.

“The consensus is that Taiwan is under a bigger threat than ever,” says Tseng Poyu, a Whole-of-Society Defense Resilience Committee member and researcher for the Doublethink Lab NGO, which tracks and fights disinformation. “Tensions right now are at an all-time high.”

**SEIZING TAIWAN’S** outlying islands would be relatively painless for China. Taiwan proper, however, remains another story. While an immediate full-scale invasion remains one option, an amphibious assault would be a far greater challenge than Russia’s land-based gambit in Ukraine, which itself has proved far from straightforward. Although only 90 miles wide, the Taiwan Strait is extremely treacherous, and transporting hundreds of thousands of soldiers across it could take weeks and require thousands of ships, whose slow pace would make them vulnerable to mines and mobile missile launchers. Few of Taiwan’s beaches are suitable for a landing, and these could be well defended. Moreover, such a brazen attempt is more likely to spur the U.S. or allies to intervene, thus necessitating strikes on American assets and bases, raising a real risk of nuclear conflagration.

Indeed, military analysts agree with Cheng that any Taiwan offensive is likely to begin with a quarantine or blockade, cutting off supplies and attempting to pressure Taiwanese citizens into surrender. “Although the Taiwan Strait increases the difficulty for the PLA to conduct an amphibious assault, it also works as a double-edged sword that the PLA can take advantage of to isolate and blockade Taiwan,” says Koo.

As Sun Tzu wrote in his 5th century B.C.E. military treatise *The Art of War*, “The greatest victory is that which requires no battle.” Published PLA doctrine details isolating an island before dispatching ground troops. Three scenarios, in ascending orders of magnitude, could be: a quarantine, blockade, or



full-scale invasion. It’s possible that any of these could be employed in isolation or incrementally.

Rather than sealing off the island, a quarantine would aim to demonstrate China’s sovereignty over Taiwan, severely disrupting trade and life in Taiwan while muddying how the U.S. and allies could effectively respond without being accused of escalation. A key goal would be to compel countries and companies to comply with China’s terms, thus turning Beijing’s claims over the territory into reality. It would be a severe dent to Taiwan’s spirit, making the islanders feel the walls closing in, that autonomy was slowly being erased.

If China’s authority is respected, it will have established a “new normal” regarding its dominion. Were the U.S. or allies to attempt to intervene and breach the quarantine, Beijing could paint them as aggressors. “It’s going to be very difficult for the U.S. to break through with any acceptable level of risk,” says Thomas Shugart, a former U.S. Navy officer and expert at the Center for a New American Security.

A significant step up from a quarantine would be a full blockade. Aside from Taiwan’s dependence on trade—exports account for around 60% of GDP—the island imports 97% of energy and 70% of food, making it extremely vulnerable to a blockade scenario, which could be imposed in response to some perceived (or fabricated) provocation or escalate from noncompliance to a quarantine.

If Taiwan refuses to capitulate in a quarantine or blockade, an invasion could follow. Under the guise of some perceived affront, like a move toward formal secession, Beijing could announce live-fire exercises around Taiwan, similar to those that followed former House Speaker Nancy Pelosi’s protocol-shredding visit in 2022. That visit was “a godsend to us,” says the senior PLA officer, allowing China to rip up decades of established engagement protocol. “From then, there was no median line, no status quo.”

Taiwan has fewer than 20 beaches on which an amphibious assault could land, and all could be fiercely defended. However, in March photos emerged of a series of new bargelike PLA ships dubbed *Shuiqiao* that can link together to form a loading dock from over a half-mile out to sea—drastically boosting Beijing’s land-invasion potency.

“China has never said we will renounce military means,”



says Professor Da Wei, director of the Center for International Security and Strategy at Beijing's Tsinghua University. "So China needs to have that capability."

**THAT BEIJING IS** honing its ability to mount a blockade isn't in doubt. Inside Taipei's red-brick Presidential Office Building, a senior official for its National Security Council (NSC) lays out a map of the South China Sea. Blue circles mark Taiwan's naval assets, with red denoting China's. There is a lot of red—99 naval and coast guard vessels, to be precise, completely encircling Taiwan during PLA exercises last December. Among them is the aircraft carrier *Liaoning*, lurking in waters close to the Philippines.

"Looking at where China's forces are deployed, it's not only geared at Taiwan," says the senior NSC official. "It feels like a practice attack against Japan, Taiwan, and the Philippines. It looks like they are trying to practice denying the U.S. access into this region. So this is very alarming."

Indeed, China's power projection is getting more brazen. In February, it conducted surprise live-fire naval drills in international waters between Australia and New Zealand, just 340 nautical miles southeast of Sydney, causing dozens of commercial flights to be diverted.

China has also been concocting a pretext for action. Despite being Cold War foes that remain officially at war, relations between the Republic of China, as Taiwan is officially known, and the PRC flourished under prior Nationalist, or KMT, governments because of the so-called 1992 Consensus, which acknowledged that both sides belong to the same country even if their respective governments bicker over which is the legitimate power. However, Taiwan's incumbent China-skeptical Democratic Progressive Party (DPP) has never

*The National People's Congress of the PRC; a PLA warplane; President Lai Ching-te inspects an exercise*

accepted the 1992 Consensus, with Lai telling TIME last year, "we are already a sovereign and independent country."

Beginning in late June, Lai further dialed up the rhetoric. He began a series of 10 televised "Talks on the Country" delivered around the

island. Far from the constructive ambiguity of the 1992 Consensus, Lai breathlessly argued that Taiwan and China are distinct, autonomous nations, drawing on historical, legal, and identity-based arguments linking the island's heritage to Austronesian culture, rather than Chinese. Moreover, Lai defined Taiwanese identity as inextricably anticommunist.

Lai's speeches were timed leading up to July recall votes that could have unseated 24 lawmakers for the pro-China KMT and thus tip the balance of power for his DPP in the Legislative Yuan. Lai himself characterized the recall vote as a popular, civic movement to "prevent annexation by the CCP."

In the end, all the recall votes failed, which provided grist to arguments amplified on pro-China social media that Lai is both a separatist and, by backing the ouster of elected officials, undemocratic. And in a worrying echo of Vladimir Putin's justification for invading Ukraine, PRC propaganda insists it falls to Beijing to fix the resulting instability. "So now they're creating a Crimea-type of logic for an invasion of Taiwan that never existed before," says Mastro.

In addition to military operations, Beijing would launch a campaign to weaken Taiwan's internal cohesion and willingness to resist. "The PRC aims to influence the international community to appease the PRC's aggression while inciting conflict and distrust in Taiwan, causing the civilian to question the government's decisions and the capacity of our armed forces," says Koo.

Again, such influence campaigns are already in motion.



In 2024, 64 people in Taiwan were prosecuted for spying for China—more than the previous two years combined. In September, four former DPP staffers were jailed for espionage, including a former aide to President Lai, and a senior staffer to Joseph Wu, then Foreign Minister and now the head of the NSC. “One of the major projects we’ve been working on is trying to improve our security-clearance systems and espionage,” one presidential staffer tells TIME. “Because as we’ve seen, there are a lot of loopholes and problems.”

But while espionage cases focus on political insiders and armed forces personnel, a campaign of engaging Taiwanese civilians is also ramping up. For one thing, the CCP has a long history of recruiting “triad” syndicates to serve as internal operatives, and potentially as a fifth column tasked with coordinating sabotage efforts in the event of an invasion. “This is particularly worrisome because some of these criminal gangs are armed and talking about armed revolt,” says the senior NSC official.

A CCP propaganda campaign is also underscoring American capriciousness under Trump. The messaging accuses the U.S. of pumping billions in funds and weapons into the Ukraine war to prolong the slaughter without putting troops on the ground—and now Trump is demanding that money back. “The propaganda says the same will happen to Taiwan,” says the senior NSC official. “And so, Taiwan should move closer to China and stay away from the United States.”

**TAIWAN IS PREPARING** for the worst. For 10 days in July, fighter jets roared, infantry exchanged fire in crowded streets, and mobile missile launchers twirled their payloads from sandy beachheads as part of its annual Han Kuang exercises. The drills were the biggest ever, involving more than 20,000 reservists and double the timeline of 2024’s, an extension

that corresponds to swelling fears of a Chinese attack. Alongside the drills, at 1:30 p.m. on July 17 deafening sirens wailed across Taipei, sending locals scurrying for evacuation centers, as an SMS flashed on every cell phone warning: “The enemy has launched a missile attack toward northern Taiwan.”

At Zhongshan High School in downtown Taipei, an instructor for the Forward Alliance NGO sets a steel pan with gasoline ablaze before asking a dozen volunteers to take turns dousing the flames with CO<sub>2</sub> extinguishers. In the classroom above, more volunteers—teachers from schools across Taiwan—crowd around a desktop map of a disaster scenario, discussing where to block traffic, cordon off the public, and station emergency services to best handle whatever crisis is unfolding. Nearby more volunteers swathe a prone rubber torso in bandages before practicing CPR.

Enoch Wu, who founded Forward Alliance in 2020, says his organization has trained some 25,000 people in disaster response to date and today works with 368 organizations—churches, private companies, community centers—to instill crisis-management skills. Courses include basic first aid, emergency-shelter logistics, and how to fly a drone to deliver a vial of insulin or assess and report damage to key infrastructure. The idea is to allow citizens to assuage the burden of Taiwan’s overstretched emergency responders, which number just 180,000 for 24 million people, or one for every 128 citizens. (By comparison, the U.S. has one for every 73 citizens.) “It’s not necessarily ‘How can I help my country?’” says Wu, who previously served in the Taiwanese army’s Special Forces Command as well as the NSC. “But more directly, ‘How can I help my family prepare for the next crisis?’”

In May, Forward Alliance launched an iCanHelp app teeming with information, from the nearest emergency shelter to survival planning and instructions for treating pediatric

blast injuries. A new campaign urges all Taiwan citizens to stockpile 10 days' worth of food in case of an earthquake, typhoon—or PLA missiles.

Forward Alliance works alongside President Lai's Whole-of-Society Defense Resilience Committee, which has been charged with making recommendations to instill preparedness across society. Every government ministry consults with the committee regarding steps they can take to build resilience. It then liaises across industries to create a database of potential resources in the event of any calamity. These could be engineers that can help repair infrastructure, religious leaders coached on taking care of displaced families, or IT specialists capable of restoring communications. "Even Uber Eats delivery drivers know every shortcut in a city and could help distribute resources if that place is under attack," says Tseng.

That Taiwan must look after itself is no secret given the island is recognized by only 12 nations and barred from international forums like the U.N. "We are far less powerful than Ukraine," says Alexander Huang, international-relations adviser for the opposition KMT. "We do not have any treaty allies. We do not have any joint training exercise or doctrine with anyone."

Moreover, Trump's recalcitrance regarding support for military action over Taiwan is broadly shared by allies. Asked by TIME in May whether he would come to Taiwan's aid in the event of a Chinese attack, South Korean President Lee Jae-myung replied cryptically, "I will think about that answer when aliens are about to invade the earth." Posed the same question, Australian Foreign Minister Penny Wong said she "declines to engage on hypotheticals," while her Canadian counterpart, Anita Anand, replied that her government "adheres to a One China policy."

Japan and the Philippines have been the most strident in backing Taiwan's sovereignty, though both have operational weaknesses and would engage only if called upon by the U.S. Yet the mood is much more forthright among ostensibly neutral nations, especially those of the Global South, where perceived American hypocrisy regarding Ukraine and Israel's offensive in Gaza has bled into discussions across the gamut of U.S. foreign policy. The fact that the U.S. officially adheres to a "One China" policy regarding Taiwan yet sells Taipei weaponry has been painted by Beijing as blatant interference in China's domestic affairs.

"China could have invaded Taiwan long ago but chose not to because Taiwan was useful," former Malaysian Prime Minister Mahathir Mohamad argues in his Kuala Lumpur office. "But the U.S. is not happy because there is no confrontation. You send Pelosi there to do what? To provoke China. So now China wants to show its strength, and Taiwan now has to increase its defense capability, buying weapons from the U.S."

**ONE OF THE STRONGEST ARGUMENTS** against war is the resulting economic devastation it would cause. Taiwan's top trading partner is China, with the U.S. in second spot. The U.S., meanwhile, imports about \$470 billion worth of goods from China, with some \$143 billion flowing the other way. In order to entrench economic interdependence, Taiwanese



semiconductor giant TSMC recently agreed to invest \$165 billion in American chipmaking, the largest single foreign direct investment in U.S. history.

Any conflict would decimate trade routes, resulting in delays and higher shipping costs, with disruptions cascading through every region and economy. Taiwan produces over 90% of advanced semiconductor chips, which are vital for a broad range of electronics, from AI data centers to smart TVs. China, meanwhile, controls 90% of the world's rare earth minerals, which are crucial for everything from missiles to wind turbines to automobiles.

"Taiwan is so important to the world," says K.S. Pua, founder of \$5.5 billion semiconductor firm Phison, who's credited with inventing the USB flash drive. "There is no alternative that could 100% take Taiwan's role. So if Taiwan shuts down, China is not going to benefit."

But while these are good reasons for China not to move on Taiwan, they are conversely just as compelling an argument for the U.S. not to be drawn into a bloody quagmire were it to. Moreover, the potential for China to seize control of key assets that the U.S. is restricting Chinese access to via export controls—like Nvidia's latest AI-powered chips, which are made exclusively in Taiwan by TSMC—would be a tantalizing prize that could in one fell swoop redefine great-power competition in Beijing's favor.

As such, the merits of the U.S. being drawn into a prolonged conflict over Taiwan will be hotly debated. Whereas



◀ Taiwanese soldiers participate in deep-battle exercises near Taichung on July 16, 2025

American bases in Japan, South Korea, and the Philippines.

Moreover, doubts over untested Chinese weaponry have evaporated following their successful deployment in Pakistan's confrontation with India in early May, when Chinese J-10C and JF-17 fighter jets shot down up to six Indian jets. "We had full-spectrum dominance," Pakistan four-star General Sahir Shamshad Mirza, chairman of the Joint Chiefs of Staff Committee, tells TIME.

Besides, a capacity vacuum is emerging as the U.S. defense posture pivots from counterterrorism back to great-power competition. True, Trump has proposed America's largest-ever military budget of over \$1 trillion for the coming year, much of which would go to asymmetric warfare systems—like the "Hellscape" program of thousands of unmanned systems able to be launched from submarines, surface ships, aircraft, and land-based vehicles dispersed across the Indo-Pacific—that would give China a big headache.

However, these systems are still several years from fruition. In the meantime, four of the U.S. Navy's Ohio-class guided-missile submarines, which are capable of sea-launching Tomahawk missiles and would be vital in a Taiwan contingency, are due to be retired over the next three years. Meanwhile, the asymmetric systems Taiwan has purchased from the U.S. won't be operational until around 2030.

"Once shooting starts, there is a very, very high probability that Taiwan gets lost," says Huang. "Because militarily, we can't win. The war-termination phase would be basically on the table, not in the field."

**TAIWAN'S ONE SAVING GRACE** may be dysfunction in the PLA top brass, among whom a tectonic power struggle is raging. Since Xi assumed CCP leadership in 2012, more than 48 senior military officers have been prosecuted for corruption. Six are former members of China's apex Central Military Commission (CMC), the tiny cabal led by Xi, who wields the greatest power over the PLA. "Even in war China wouldn't have lost so many generals," says Huang.

The question is whether turmoil among China's brass hats signals a military unprepared for such a mammoth undertaking like a Taiwan assault. Or, conversely, is Xi putting the pieces in place to ensure only loyal generals who share his conviction for reunification are in place, before pressing the button? "It's hard to say whether the anticorruption stuff signals Xi lacks confidence or that he has a lot of confidence," says Mastro.

For *Zero Day Attack's* Cheng, the goal was to at least raise awareness among the island's population about the stakes. It's come at some cost; actors and crew have been blacklisted from working on future Chinese productions, she says, meaning many staff chose to stay anonymous, even if that wasn't an option for the cast. Still, Cheng believes it was a price worth paying.

"If we don't talk about this now, maybe it will soon be too late," she says. "If China really does control Taiwan, then we can't talk freely anymore." □

former President Joe Biden on four occasions vowed to defend the island against Chinese aggression, it's a subject that Trump has uncharacteristically shied away from. "I never comment on that," he told reporters in February. Last October, Trump told the *Wall Street Journal* that he would deter China with tariffs. "I would say: if you go into Taiwan, I'm sorry to do this, I'm going to tax you at 150% to 200%," he said.

But given Trump has already hit China with tariffs of 130%, it's unclear what economic tools he has left to wield, or if Xi would even care. Time and again, Xi has shown a willingness to weather economic blows for state and party security—be it international sanctions over his crackdown on Uighur Muslims, cutting tycoons like Jack Ma down to size at the cost of \$1.5 trillion wiped off Chinese tech stocks, or meeting U.S. import levies in kind. "If Xi thinks he just has to pay a trillion dollars in tariffs for Taiwan, he'll pay it," says Shugart. "You're not going to stop them with cost. He's willing to take that hit."

There's also a question of whether the U.S. even has the wherewithal to spoil Xi's plans. Although the U.S. boasts the world's dominant military, its Navy's 299 deployable combat vessels are spread thin across the globe. China, meanwhile, operates the world's biggest naval fleet, including over 370 battle-force ships with seemingly one target in mind. China's medium-range missile arsenal has swelled from 600 a few years ago to 1,300 today, more than enough to decimate



▶ THE FACILITY, EUROPE'S LARGEST, ON THE BANKS OF UKRAINE'S DNIPRO RIVER

**H O W  
T O  
S T E A L  
A  
N U C L E A R  
P O W E R  
P L A N T**

**A N D  
G E T  
A W A Y  
W I T H  
I T**

BY SIMON SHUSTER/ZAPORIZHZHIA

# V L A D I M I R P U T I N H A D D O N E H I S H O M E W O R K .

He knew the layout of the nuclear power plant in southern Ukraine, the source of the water that cools its reactors, and the high-voltage cables that move its electricity. He knew where a shell had recently exploded, punching a hole in the roof of a building, and where a fire had started while Russian troops seized the facility in the spring of 2022. He also knew, perhaps better than anyone, how dangerous it had been to turn the plant into a battleground.

“He knew it all very precisely,” says Rafael Grossi, the head of the U.N.’s nuclear watchdog, the International Atomic Energy Agency (IAEA). “Not just in general terms. He knew it all down to the technical details.” Grossi has met with Putin several times to discuss the standoff at the nuclear power plant, which remains under the control of Russian forces in Ukraine’s Zaporizhzhia region. Their first meeting, held in a palace outside St. Petersburg in October 2022, led Grossi to conclude that the plant plays an outsize role in Putin’s military strategy. “It’s become larger than life,” he tells me.

Even the basic details of the situation can sound like the clumsy plot of some apocalyptic thriller. An invading army has seized Europe’s largest nuclear plant, taken thousands of its employees hostage, and turned the grounds—home to a large stockpile of nuclear fuel—into a forward operating base in the middle of an active war zone. None of these facts are in serious dispute. They have been confirmed by satellite imagery, eyewitness testimony, U.N. nuclear inspectors, direct statements from Russian officials, and footage taken inside the plant.

For Putin, the Zaporizhzhia plant serves as a valuable

asset, one that can be traded to extract concessions from the West. In the eyes of the Ukrainians and many of their allies, the situation looks not just bleak but exceptionally dangerous. The crisis is playing out in the same country that produced the worst nuclear catastrophe in human history: the 1986 explosion of Reactor 4 of the Chernobyl Nuclear Power Plant, a short drive north of Kyiv. That disaster was caused by a series of technical mistakes and shoddy engineering. The present crisis in Zaporizhzhia, on the other hand, was created by Putin, who ordered the occupation of the plant nearly four years ago. Since then, none of the world’s great powers or international institutions have been able to loosen the Russian leader’s hold on it.

Grossi, the head of one of these institutions, admits as much. From his office in Vienna, where we met for an interview last year, the Argentine diplomat and IAEA chief has tried to keep the Zaporizhzhia plant on the agenda of the U.N. But he has largely failed. The matter barely came up during the most

recent gathering of the General Assembly in September. Instead, as world leaders gathered at U.N. headquarters in New York City, the nuclear plant in southern Ukraine lurched toward a crisis. On the evening of Sept. 23, intense fighting near Zaporizhzhia cut off the plant’s external power supply. It was the 10th such blackout since Russia took over the facility, and it caused barely a blip on the global news agenda. Only about a week later, when the duration of the outage exceeded the previous ones, did it begin to make headlines.

Nuclear experts, including Grossi and his team at the IAEA, have insisted that the risks to nuclear safety at the plant remain dangerously high. In 2022, the Russians placed the plant into what’s known as a cold shutdown, and its reactors have not produced electricity since. But amid the blackout, the systems used to cool the reactors have run on emergency backup generators. If those systems fail—or simply run out of diesel—the plant would have no way to stop the nuclear fuel inside those reactors from overheating and potentially melting down.

The Trump Administration, in its ongoing talks with Grossi and both of the warring sides in Ukraine, has tried to arrange for the power supply to be restored, a senior U.S. official tells TIME. “The Russians have agreed to it. The Ukrainians now have recently agreed to it. Grossi’s team is fixing it right now,” the Administration official said in an interview on Oct. 17. The following day, Grossi confirmed that these repairs were under way. Although they would take “some time” to complete, he added, “there is now finally some light at the end of the tunnel.”

But restoring those power lines will not resolve the



▲  
PUTIN, PICTURED  
IN SEPTEMBER,  
CHOSE TO SEIZE  
THE PLANT AS A  
“BARGAINING CHIP”

broader stalemate over the future of the reactors. Without a deal to end the war, they will remain on the front line, susceptible to the fighting that continues to rage around the power plant. Grossi, in his recent statements, has made that clear. The emergency power supply to the facility remains its “last line of defense,” he said on the seventh day of the most recent blackout. “It is clearly not a sustainable situation in terms of nuclear safety.”

Sustainable or not, the situation has become the status quo, a slow-motion catastrophe that only one man has the power to stop. But Putin has shown no willingness to release his grip on the power plant. And his peers have chosen to let the question fester, pretending the battle for control of a nuclear power plant does not qualify as an emergency in a world gone deaf from the ringing of alarms.

**THE RUSSIANS MADE** their first attempt to seize the Zaporizhzhia plant during the opening days of the invasion. Their tanks and armored columns were moving north from Crimea toward the Ukrainian heartland, along the Dnipro River. The nuclear facility stands on a bend in that river, anchoring the town of Enerhodar, which had a population of just over 50,000 people at the time.

Many of them, including thousands of the plant’s employees and their family members, managed at first to block the advance of the Russian forces. They dug up the back roads into town and built improvised barricades, blocking

the highway with slabs of concrete and piles of old tires. “Our aim was not to let them rush in like a blitzkrieg,” says Oleg Orlov, the mayor of Enerhodar, who helped organize these efforts.

For several days, it worked. The invaders did not fire at the crowds of unarmed locals manning the makeshift barriers. But on the evening of March 3, 2022, the Russians returned with orders to seize the facility by force. Their ensuing battle against a detachment of Ukrainian troops lasted through the night and into the following morning, with the

Russians firing heavy machine guns and shells toward the nuclear plant, setting one of its administrative buildings on fire. Orlov went into hiding, doing his best to organize supplies of food, medicine, and, when possible, evacuations for Enerhodar’s residents.

As they took control, the Russian commanders tried at first to keep the population calm. They needed the plant’s staff to continue working.

The invaders did not know how to operate the reactors; most of the Russian troops had never seen the inside of a nuclear power plant before. Pacing around the control room with their rifles, they looked like hijackers who had barged into the cockpit with no idea how to fly.

One of their leaders, a colonel of the Russian National Guard named Sergei Dovgan, began to act as the commandant of the surrounding town. He and his comrades imposed

**‘IT’S BECOME  
LARGER  
THAN LIFE.’**

—IAEA CHIEF RAFAEL GROSSI,  
ON THE POWER PLANT’S  
IMPORTANCE TO PUTIN

a price of around \$700 for civilians to leave Energodar, and his men collected these bribes at the checkpoint leading out of town, according to Ukrainian investigators and locals who witnessed the practice. At the same time, Dovgan tried to control the most rampant abuses his troops committed, fearing they might cause his hold over the townspeople to slip. In one phone call intercepted by the Ukrainian intelligence services and shared with TIME, Dovgan discusses incidents in which his troops engaged in “marauding” and “terrorizing” civilians. “I’m going to work on it,” Dovgan says, according to a transcript of the call. “Keep it quiet.”

Things changed about two weeks into the occupation of Energodar, when agents of the FSB, Russia’s main intelligence service, began to assert a tighter hold over the town. The use of violence and torture became systematic, according to Ukrainian investigators and victims of these abuses. Among those victims was Ivan Samoydyuk, the deputy mayor of Energodar. In the middle of March 2022, the Russian occupying forces allowed him to leave town for a couple of days to pick up a truckload of food and medicine in a nearby city that remained under Ukrainian control. His wife and children were not allowed to leave with him, ensuring that he would not try to escape.

Upon his return, the deputy mayor distributed the aid to local residents. He was driving home when a group of Russian troops pulled him over, bundled him into a car, and placed a bag over his head, according to Samoydyuk. He says he spent the next 323 days in their custody, first in an isolation cell in the occupied city of Melitopol and later in a filthy garage converted into a makeshift prison nearby. His captors held him incommunicado, routinely beat him, and deprived him of food and sleep, he told me in an interview after his release.

“It was impossible to sleep,” he says of the first prison, where he was held for 135 days. “As soon as you began dozing off, the sounds of torture from one of the nearby cells would start up again.” (Samoydyuk declined to discuss the means of torture he alleges were used against him, saying that he “did not want to relive” what was done to him.)

The aim of his captors, Samoydyuk says, was to turn him into a collaborator, so that he might go back to Energodar and persuade its people to accept the Russian occupation. The Russians were especially intent on winning the cooperation of the power plant’s nuclear engineers and other employees. They tried to entice Russian nuclear scientists to come work in the war zone, but few volunteered. So the plant’s Ukrainian engineers were forced to continue working as hostages. The Russians ordered them to renounce their Ukrainian citizenship and accept Russian passports, according to investigators and witnesses of these events.

Rosatom, the Russian state nuclear corporation, took over management of the plant in the spring of 2022.

**THE IAEA HAD  
NEVER IMAGINED  
A NUCLEAR  
POWER PLANT  
ENDING UP ON  
THE FRONT LINES  
OF A WAR**

## On the front line

The power station in southern Ukraine sits in an active war zone



(The company declined numerous requests for interviews.) Its reactors were shut down, which stopped the generation of power and lowered the risk of a catastrophic meltdown. But the engineers still need to cool the nuclear fuel inside those reactors by pumping water over it in a constant cycle. If the fuel rods were to overheat, they could explode, potentially causing a release of radiation that could spread with the wind in any direction. Any threat to these cooling systems, Grossi told me, “puts the safety and security of the plant at risk. It makes the functioning of many safety aspects of the plant very difficult.”

**FOR THE UKRAINIAN LEADERSHIP** in Kyiv, the occupation of the power plant marked a singular moment of terror and helplessness in a year that had plenty of both. On the night it started, aides to President Volodymyr Zelensky stayed up late in their command center, a fortified bunker deep beneath the presidential compound in Kyiv. News from the power plant reached them in the early hours of the morning, as two of Zelensky’s aides sat in the bunker’s conference room, drinking whiskey with cola and monitoring the news.

One of them, Kyrylo Tymoshenko, noticed the distress messages coming from the power plant. Tymoshenko pulled up a video feed from the plant’s security cameras on his computer. It showed the Russian assault in real time. “They were just blasting it with their tanks,” Tymoshenko told me later. Machine-gun rounds showed up as white streaks on the screen, and he could hear the managers of the facility using a loudspeaker to broadcast a message to



the attackers: “Stop shooting immediately! You are threatening the security of the whole world!”

At the time, a small detachment of troops from Ukraine’s National Guard were stationed at the power plant. Tymoshenko got their commander on the phone, and ran to find his bosses in the bunker. “I was going around the corridors, looking for people, and I came across the President,” Tymoshenko says. He recalls telling Zelensky, “There’s tanks shooting at the nuclear power plant. There’s a battle going on.”

The President could not deploy reinforcements. Ukraine’s military units were engaged along other sectors of the front line, which stretched for nearly a thousand miles at the time across the north, east, and south of Ukraine. Zelensky saw only one way of influencing the situation. Before dawn in Kyiv, he prepared a statement, sat down at his computer in the bunker, and read it aloud: “Europeans, please wake up! For the first time in our history, in the history of humanity, a terrorist state has resorted to nuclear terrorism.”

News of the assault spread around the world, and protesters condemned it in a handful of European cities. From the bunker, Zelensky addressed several gatherings via video link, including the demonstration held in Vienna, where the U.N.’s nuclear watchdog is based. Grossi soon released a statement of his own. The Russian attack, he said, created “unprecedented danger” of a nuclear calamity.

But the IAEA, whose typical work involves inspecting nuclear facilities around the world, had no playbook for such a scenario. Its experts worked hard to prepare for a variety of disasters, such as a freak weather event, a terrorist attack, or an airplane accidentally crashing into a reactor. But they had never imagined a nuclear power plant ending up on the front lines of a war. “In terms of having a full plan, no, it was never predicted or foreseeable,” Grossi told me. “In those initial hours,” he added, “we were fearing an accident. We were fearing a battle for the plant.”

**THE FIERCEST BATTLE** for control of the plant took place that summer, about half a year into the Russian occupation, when Ukrainian forces tried to seize it back. Under the cover of night, a flotilla of boats, some of them commandeered from local fishermen, tried to cross the Dnipro and land on the embankment near the plant, according to three Ukrainian military officers involved in the planning and execution of the assault.

One of the officers, a special-forces commando who discussed the operation on condition of anonymity, recalls lying in the pitch-dark belly of a river barge alongside dozens of his comrades, all of them armed to the hilt, eyeing one another through

▲ **GROSSI, CENTER, DURING A VISIT TO THE POWER PLANT IN MARCH 2023**

night-vision goggles. The wait lasted hours, he says, but the boat never made it across. The initial waves of the Ukrainian assault were not able to gain a foothold on the opposite side of the river. “Eventually we got the orders to pull back,” says the officer. “The mission failed.”

By chance, Grossi and some of his colleagues from the IAEA arrived in Ukraine just as that mission was under way. Stepping off the train at Kyiv’s central station, the team rode to the presidential compound to meet Zelensky in the hope of securing his blessing to make a trip to the plant. The President resisted the idea. He worried that a visit from a U.N. agency could be seen as legitimizing the Russian occupation, according to a senior Ukrainian official who took part in the meeting. Zelensky also wanted the U.N., rather than acting as mediators or neutral observers, to demand that the Russians withdraw from the facility.

Grossi pushed back. He told Zelensky the IAEA has no authority to make such demands. The agency answers to the U.N. Security Council, where Russia has veto power over key decisions. Grossi could not appear to take sides in the war. “We needed to be objective,” he says. When Zelensky insisted, Grossi explained that the agency is devoted to

nuclear safety, not conflict resolution. His core mission would be to inspect any damage to the plant and to assess the danger of a nuclear accident. He also hoped to establish a permanent team of U.N. observers who would stay behind to keep an eye on the facility. That would be impossible without approval from both the Russian forces and the Ukrainians.

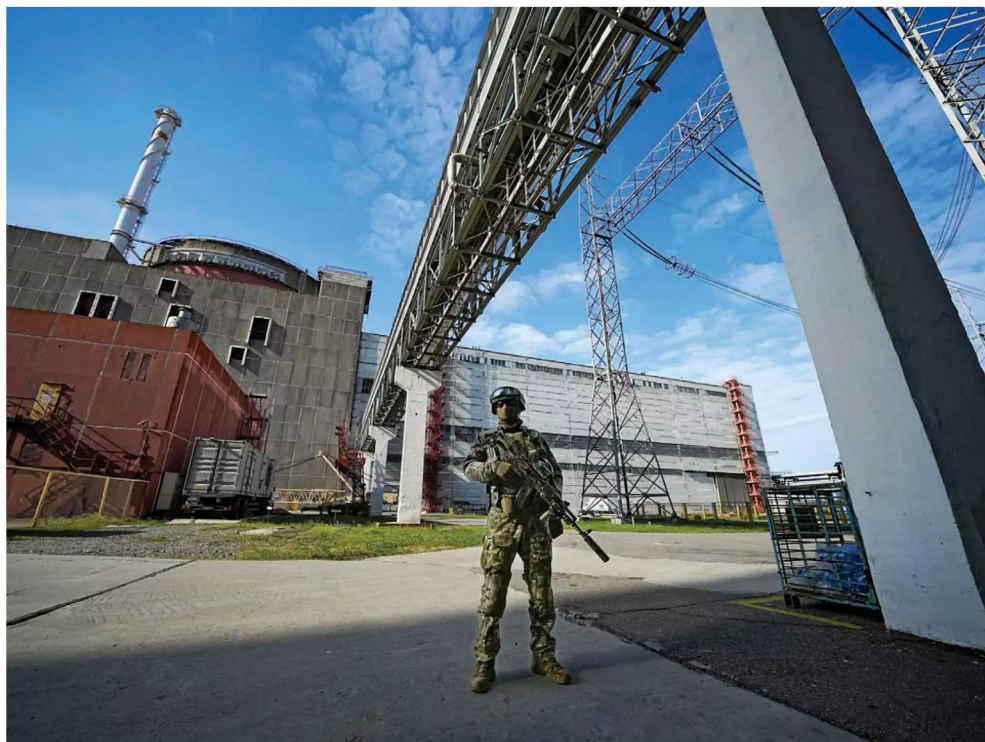
After hours of talks, Zelensky relented, allowing the IAEA team to proceed. Upon their arrival in the city of Zaporizhzhia, Grossi's security detail went ahead to scout out the path to the nuclear power station. It led straight through the no-man's-land between the Ukrainian and Russian positions. "It was not even a dirt road," Grossi recalls. His bodyguards came back and told him the convoy would not be able to pass. Intense fighting had broken out in the area, with artillery fire and combat drones crisscrossing the sky. "There was a military operation," Grossi says, "an attempt to storm the plant with amphibious forces crossing the river."

After more than a day of delays, Grossi and his team managed to reach the Russian checkpoint, where a group of officers came out to greet them with a show of hospitality. They provided a military escort to the power plant, featuring Russian helicopters and combat vehicles riding in formation. "It was a very impressive scene," Grossi recalls. "Very dramatic."

Under the watch of Russian military officers, the U.N. officials took a tour of the plant and met with some of its Ukrainian staff. Nearly 5,000 employees, from cafeteria workers to nuclear physicists, had remained at their posts to keep the facility running safely. Many still wore the uniforms of Ukraine's state nuclear company, Energoatom. "They were saying it's a Ukrainian facility," Grossi recalls, "and they are operating under the supervision of the Ukrainian regulator."

The Russians tolerated such defiance in those early weeks of the occupation, and they allowed Grossi to set up a monitoring mission at the plant, with IAEA inspectors rotating in and out every few months. But they did not get permission to visit every part of the facility. Its control room, for instance, remained off-limits.

That first mission by the U.N. inspectors presaged the beginning of a stalemate that has endured for more than three years. It remains unclear whether Putin intends to



▲ RUSSIAN FORCES HAVE OCCUPIED THE FACILITY SINCE THE SPRING OF 2022

restart the reactors and use the electricity to supply the parts of Ukraine that Russia had occupied, or whether he aims to trade the facility for more Ukrainian territory or other concessions. Persistent battles for the surrounding region of Zaporizhzhia have periodically cut off the power supply to the station itself. Each of those disruptions has led to statements of concern from the IAEA and calls for help from the Ukrainian authorities. But no one has been able to end the standoff.

After the latest blackout began in late September, the Ukrainian authorities accused the Russians of intentionally cutting off the plant from Ukraine's power grid, with

the possible goal of trying to connect it to high-voltage lines belonging to Russia. "Moscow tries to fool the IAEA and the whole technical and diplomatic community by pretending that the problem is caused by anyone other than itself," said Ukrainian Foreign Minister Andriy Sybiha.

**THROUGHOUT THE WAR**, the power plant has remained one of Putin's most valuable sources of leverage over the Ukrainians in the halting efforts

to secure a cease-fire. Since taking office in January, President Donald Trump has spoken with Putin several times about the nuclear power plant, both by phone and in person, according to official readouts of these conversations. After one of these talks in March, Trump suggested that the U.S. could take command of the plant from the Russians.

**'YOU ARE  
THREATENING  
THE SECURITY  
OF THE WHOLE  
WORLD!'**

—A PLANT MANAGER,  
WARNING THE RUSSIAN ATTACKERS



The U.S., Trump said, “could be very helpful in running those plants with its electricity and utility expertise.”

Secretary of State Marco Rubio later clarified that the idea had also been discussed with President Zelensky. “American ownership of those plants would be the best protection for that infrastructure and support for Ukrainian energy infrastructure,” Rubio said in a statement in March. The following month, Steve Witkoff, Trump’s special envoy in talks with the Kremlin, discussed the idea with Putin, and included it in a proposed “framework” for peace in Ukraine. The proposal, which Witkoff showed to European diplomats, suggested that Ukraine would regain at least some level of formal ownership of the facility, but that it would function under “U.S. control and administration,” according to a copy of the offer published by Reuters. The electricity produced at the plant, it said, would then be “distributed to both sides.” Yet the Ukrainians have rejected any plan that leaves the facility even partly in Russian hands. As part of any future peace deal, Zelensky may need to accept a “sharing relationship on the amount of energy” that comes out of the power plant, the senior official from the Trump Administration told TIME on Oct. 17. That remains a central part of the peace process the White House is pursuing.

But as those talks have moved forward in fits and starts, Russian forces have continued to use the plant’s grounds as a military fortress, according to U.N. inspectors and other witnesses. They have dotted the perimeter with mines, stockpiled weapons, and garrisoned troops inside. A video posted online by one of the Russian occupiers appeared to show rows of military vehicles parked within a turbine

hall. For Putin and his generals, the plant served as a foothold from which to push deeper into southern Ukraine.

Those efforts have mostly failed. North of the Dnipro River, the region of Zaporizhzhia remains under Ukrainian control. But the towns and cities nearest to the nuclear plant have found themselves under relentless bombardment from Russian artillery, missiles, and combat drones. Many of the strikes appear to originate from the area around the power plant. “They use us for target practice,” says Yevhen Yevtushenko, the former mayor of Nikopol, which sits directly across the river from the plant.

When I visited Yevtushenko last year, he took me up to the roof of city hall to have a look at the nuclear plant in the distance, its cooling towers on the horizon a few miles away. The streets below looked deserted. Nearly all residents of Nikopol had fled, because the constant threat of attacks from the air made it dangerous for them to venture out of their homes. Russian drones had started targeting civilians, Yevtushenko told me. That week, one of them had flown into a woman’s garage as she parked her car inside. The explosion killed her.

▲  
**NETS SHIELD  
THE POWER  
STATION FROM  
DRONE ATTACKS**

Even if the Ukrainian military had no chance of liberating the plant by force, Yevtushenko hoped the U.N. observers stationed there could at least pressure the Russians to stop firing at his town. Walking over to a cabinet in his office, he pulled out a piece of shrapnel about the size of a walnut. It had flown through his window and gotten lodged in the ceiling after a Russian missile strike. Yevtushenko asked me to give it to Grossi.

The following week, when I visited the IAEA headquarters in Vienna, the memento struck the agency’s director as a personal rebuke. Rolling it around in his hand, Grossi thanked me for passing it along and asked me to send a message in response. The IAEA could not end the occupation of the nuclear plant. Nor could it force the Russians to stop using the facility as a launching ground for their attacks. But that did not make the mission of the U.N. monitors any less valuable, Grossi told me.

“If you are from Nikopol, you don’t want to see a nuclear accident taking place on the other side of the river,” he said. The IAEA and its staff were committed to preventing such a catastrophe, and they were putting their lives on the line to prevent it. “I think this is very important, and we will continue,” Grossi said. Looking down at the piece of shrapnel in his hand, he added, “This story is being written day by day. We don’t know the ending yet.”  
—With reporting by ERIC CORTELESSA/WASHINGTON □

# HENNION & WALSH & A TEAM BUILT AROUND YOU



Hennion & Walsh was made for people like you. People who have earned everything they have through grit and hard work. People who understand the value of experienced, highly skilled professionals.

That's why we don't give you generalists to work with. Instead, you'll have access to an entire team of specialists who are determined to help you reach your financial goals. They're chosen specifically for your circumstances, so whether you need a CFP®, CFA®, fixed income specialist, portfolio manager, insurance specialist or someone else – they'll be ready. Ready to give you the best chance of building the life you want. Why do we offer all this & more? You've earned it.

To learn more or to request a free, no obligation second opinion on your stock market or fixed income investments, get in touch.

Call us at **(800) 279-5279**  
or visit **[hennionandwalsh.com](http://hennionandwalsh.com)**

HENNION & WALSH  
ASSET MANAGEMENT

# TIME100 CLIMATE

**THE 100 MOST  
INFLUENTIAL  
LEADERS  
DRIVING  
BUSINESS  
CLIMATE  
ACTION**



ILLUSTRATION BY TAYLOR CALLERY FOR TIME

*With reporting by Jessica Bernhard, Jay Bouchard, Esha Chhabra, Leslie Dickstein, Anna Fiorentino, Chad de Guzman, Charlotte Hu, Jessica Hullinger, Marina Lopes, Kyla Mandel, Micheline Maynard, Simmone Shah, and Justin Worland*

## Tyler Norris

HEAD OF MARKET INNOVATION,  
ADVANCED ENERGY TEAM  
GOOGLE

BY JUSTIN WORLAND

TYLER NORRIS SPEAKS JUST AS YOU might expect a renewable-power developer turned academic would talk. Phrases like *maximum nameplate capacity* and *new load integration* glide off the tongue. He delves into the details of how electricity markets are designed and waxes poetic on the challenges facing the U.S. electric grid. To the untrained ear, it sounds so wonky that it must be trivial. But, to the contrary, the research Norris published with Duke University this year on how data centers consume electricity has shaken the power sector and recast the conventional wisdom about the future of U.S. emissions. His work has helped inspire startups to launch new solutions and spurred big tech companies to look for new ways to tackle data center power demand. All of that disruption and innovation comes from Norris' asking a relatively simple question: What if data centers could modulate when they use energy?

To understand the significance of that question, it's important to grapple with unfolding dynamics in the U.S. power sector. Across the country, data centers are popping up to feed the growing demand for AI. And with that, the hunger for electricity is surging. To meet that need, utilities and power companies have rejiggered their plans, to keep coal-fired power plants running and build new natural gas facilities. But Norris' research, published in February, found that the impact of limiting data-center demand for a small amount of time—less than a day over the course of a year—would be large enough to add a significant share of planned new data centers without new power plants. "People were looking for a solution that seemed achievable," he says of why his research resonated.



Since then, the research has become a focal data point in U.S. energy and climate discussions. Founders of well-funded startups and grassroots activists alike have cited it in conversation. “It’s taken on a life of its own,” says Norris.

Like many developments over the past year, the growth in electricity demand from data centers is a bleak one for climate goals. But, in challenging times, the best leaders, like many of the honorees on this year’s TIME100 Climate list—from an entrepreneur who has created a business out of restoring tropical forests to politicians stepping into the void left by the U.S. federal pullback—turn challenges into opportunity. Perhaps nowhere in the climate space is there greater opportunity to do so than with AI-driven growth of electricity demand. In aggregate, big companies have committed to spending hundreds of billions on AI, including whatever it takes to find the necessary power. If used correctly, the AI spending could catapult the U.S. to a cleaner electricity system. Fittingly, this fall, Norris left his position as a Duke University researcher to join Google’s advanced energy team—an opportunity to take some of his thinking to one of the world’s biggest purchasers of energy for data centers.

**THE IDEA BEHIND** Norris’ now famous paper came almost too simply: he connected the dots between the old-school utility industry and innovative technology players. In a series of closed-door sessions in 2024 hosted by Duke, representatives from electric utilities and state regulators questioned whether data centers really require peak power levels 24/7, or if there might be some flexibility. It was an unconventional question: in the 20 years that data centers have been a significant part of the grid, their developers have consistently demanded the highest levels of reliability.

But AI is different—and Norris knew it. Training AI models, which accounts for a significant chunk of the AI energy usage, can be stretched over longer periods of time if necessary. And, in some cases, AI queries can be delayed without much inconvenience. So Norris set out to measure what that would mean in aggregate.

The answer was stark. Researchers pointed out that peak-demand electricity can happen for just a few days a year—either in summer or winter depending on your location. So by reducing AI data-center consumption for a cumulative period of a little less than one day over the course of a year—by pausing or slowing nonurgent computation during peak hours—the U.S. could add 76 gigawatts of new data-center load without building any new generation. (For reference, the entire state of Florida has less than 70 gigawatts

of power capacity.) Grow the time period just a little, to roughly four days a year of cumulative time, and 126 gigawatts of new data-center demand could be added to the grid without new power generation. “A very modest amount of flexibility from new loads can enable a very substantial addition of new-load capacity,” says Norris.

The paper caught on like wildfire. Startups like Emerald AI, a platform that allows data centers to adjust their power consumption on demand, founded by one of this year’s TIME100 Climate honorees, Varun Sivaram, used the analysis to support the company’s launch. In the financial community, the research has helped reframe the AI-power challenge. Goldman Sachs released a paper in August citing Norris to explain how the grid “crisis becomes an opportunity.” And, over the summer, Google announced partnerships with the utility Indiana Michigan Power and the Tennessee Valley Authority to cut power consumption from data centers in their service territories at key times. While much of this work had been percolating before the paper, the research offered a proof point, helping make these initiatives exciting and investable.

**ACADEMIC RESEARCH HAS BEEN** and continues to be an absolute necessity to understand climate change—both the problems and the solutions. But, with emissions rising rapidly, there’s a premium placed on the ability to scale solutions quickly—and few companies have committed as many resources to the challenge as Google. “You can count a handful of institutions that are doing as much innovative work in clean energy as Google is right now,” says Norris.

That work took off 15 years ago as the company helped bring corporate power purchase agreements (PPA) to life. PPAs are vehicles for companies to sign long-term deals to buy renewable energy at a fixed price. But at the time, most corporations—even big ones—simply didn’t get involved in long-term energy purchases. Google paved the way, creating the framework that allowed companies to buy in, helping the approach take off. With Google’s support, PPAs drove a massive boom in U.S. clean-energy deployment.

This strategy has worked to this day. Last year, even as the company’s energy usage grew with its rising AI footprint, Google’s data-center energy emissions fell—the result of those continued clean-energy purchases. The company’s carbon emissions grew more than 50% from 2019 to 2024, though that growth came largely from its suppliers and end users rather than its own operations.

And alongside rising energy demand, the AI boom has created another opportunity to innovate. With

just a quick glance, it's easy to pick out Google's fingerprints on a slew of the most promising clean-technology developments of the past year. In May, the company signed an agreement to buy fusion power from Commonwealth Fusion Systems (CFS), a major boon not just for CFS but also for the nascent energy source. That month, Google also won approval in Nevada to supply a data center with geothermal power provided by Fervo Energy. And, in August, the company entered a deal to bring electricity to the grid from Kairos Power's small modular reactors, a new form of nuclear technology.

"We can't solve the energy challenges of this century with the technologies from last century," says Michael Terrell, head of advanced energy at Google and a member of the 2025 TIME100 Climate list. "We need to have a broader set of solutions, and that's something that we're committed to pioneering."

Google, with its big balance sheet and expert staffing, can make tackling the coming electricity crunch look easy, but it will be anything but. For one, only some of the big tech companies have doubled down on commitments to zero-carbon electricity. Others have instead embraced natural gas as a quick fix. And there are hundreds of smaller companies, less vulnerable to public scrutiny, that aren't thinking about climate at all.

Even still, creating the right technology is only a small part of a much bigger puzzle. Market structures need to be redesigned to incentivize new technologies and approaches to take off, requiring the participation of regulators and politicians. A wider set of corporate energy buyers need to prioritize cleaner energy—even if climate isn't as much of a public topic as it was just a few years ago. And, importantly, electric utilities need to buy in—a tall order considering they make their money by building new infrastructure, including and especially fossil-fuel infrastructure. While many have shown interest in innovative solutions to slow demand, utilities are by and large still pushing to build new power plants.

"It's going to be hard, like trying to turn an aircraft carrier around," says Norris. "But unless there is a concerted effort to choose another direction, there will very likely be a massive expansion of new fossil-fuel capacity in the U.S. and elsewhere."

**Eduardo Paes**

**MAYOR  
RIO DE JANEIRO**

"Countries in the Global South have the chance to develop sustainably from the start," says Paes. He's put the idea into practice, adding new parks and green spaces, electrifying the transport system, and making municipal buildings run on 100% clean energy, among other measures.

**Eva Riesenhuber**

**GLOBAL HEAD OF  
SUSTAINABILITY  
SIEMENS**

Under Riesenhuber's leadership, Siemens has made its products more energy-efficient, financed renewable energy projects, and launched major initiatives to electrify transportation in Egypt and India.

**Gavin Newsom**

**GOVERNOR  
CALIFORNIA**

"The most expensive and dangerous option before us is doing nothing," says Newsom. So he's pushed to make California a leader in the energy transition: roughly two-thirds of its energy comes from clean sources, making it the largest economy in the world to hit such a milestone.

**Grace Fu  
Hai Yien**

**SUSTAINABILITY  
MINISTER  
SINGAPORE**

Singapore's plans to reshape its infrastructure to be more green and livable have made it a city to watch. Fu oversees key climate adaptation efforts such as coastal protection, water resilience, and food resilience.



**Jennifer Geerlings-Simons**

**PRESIDENT  
REPUBLIC OF SURINAME**

Within days of taking office as Suriname's President in July, Jennifer Geerlings-Simons signaled a sharp pivot toward environmental protection—a timely shift for one of only three countries that absorb more CO<sub>2</sub> than they release. By August, she announced a moratorium on new large-scale logging permits and launched a comprehensive national forest survey. She also moved to fast-track recognition of ancestral territories. Her message to other world leaders is blunt: "We are running out of excuses, but we are not running out of solutions."

**Andrew Dempsey**

**DIRECTOR OF SUSTAINABILITY  
REI**

When REI hit its zero-waste target in 2024—diverting at least 90% of waste across its operation away from landfills—it became the first major retailer in the U.S. to do so. Sustainability director Andrew Dempsey and his team have taken a multipronged approach, including reducing plastic packaging and training staff to divert plastic to partners like Trex, which turns it into decking (with Trex, they've recycled 2.5 million lb. of plastic since 2020). REI is also a leader in recycling e-bike batteries, fuel canisters, and bike tubes and tires, and made strides in repairing textiles and selling upcycled gear.

**Pralhad Joshi**

**MINISTER OF NEW AND RENEWABLE ENERGY  
INDIA**

The world's third largest emitter of greenhouse gases, India is still expanding its coal-fired power capacity. But it's also over halfway to its clean-energy goal of 500 gigawatts of non-fossil-fuel capacity by 2030. Under the stewardship of Pralhad Joshi (who took over the renewables ministry in 2024), India set a course to become the world's second largest growth market for renewables. By September, India added 30 GW of renewable-energy-generation capacity, and it aims to reach 43 GW by year-end, enough to power over 10 million homes.

GEERLINGS-SIMONS: RANU ABHELAH—REUTERS; CORREA DO LAGO: ADAM GRAN—AP; HOCHUL: ANTHONY BEHAR—SIPA USA/AP

## André Corrêa do Lago

**PRESIDENT  
COP30**

As the president of the annual U.N. climate summit—this year, COP30 will be held in Belém, Brazil—André Corrêa do Lago is charged with showing the world that multilateralism can still deliver amid deep divisions between countries. “The only way of solving important issues is through cooperation,” he says. “But the international context is quite complex.” For decades, climate insiders worried the process would collapse if the U.S. pulled back. But he sees a way forward: if COP30 can mobilize coalitions that move steel, power, forests, and trade in the right direction, multilateralism will have done its job.



***‘We have to make sure that we can convince people that this can bring very positive impacts.’***

—André Corrêa do Lago on COP30

## Gillian Martin

**CABINET SECRETARY FOR CLIMATE ACTION AND ENERGY  
SCOTLAND**

Soon after taking office in June, Scottish politician Gillian Martin helped launch a pilot program to support 200 oil and gas workers’ transition into clean-energy jobs in the country’s North East, a region long seen as Europe’s oil capital. The endeavor will provide career support and funding for work training to move into sectors such as offshore and onshore wind, hydrogen, and carbon capture. It’s just one part of the Scottish government’s more than £120 million investment to transform the area from an oil and gas hub to a net-zero leader—and create green-energy jobs along the way.

## Sarah Kapnick

**GLOBAL HEAD OF  
CLIMATE ADVISORY  
J.P. MORGAN**

Kapnick is helping J.P. Morgan’s clients incorporate climate change into their business decisions. Her “Climate Intuition” reports channel her expertise as former chief scientist of NOAA into actionable insights on unlocking value.

## John Curtis

**U.S. SENATOR  
UTAH**

Curtis, a Republican, has made climate change a defining issue of his tenure on Capitol Hill. He’s urged his party not to throw out useful policy, leading to softer language on phasing out clean-energy tax credits, rather than immediately ending them.

## Yann Quilcaille

**RESEARCHER  
ETH ZÜRICH**

Quilcaille’s latest study, published in *Nature* in September, is the first to explicitly link emissions from the world’s largest carbon emitters—companies including ExxonMobil and Saudi Aramco—to the worst heat waves over the past quarter-century.

## Salvatore Vinci

**TECHNICAL LEAD OF HEALTH CARE FACILITIES ELECTRIFICATION  
WORLD HEALTH ORGANIZATION**

When a doctor in Tanzania told Salvatore Vinci in 2015 that two babies had died because of a lack of electricity for incubators, it changed his career. “When we talk about energy, it’s not just for a cleaner environment, it’s really saving lives,” Vinci says. Now he leads projects electrifying health care facilities across low-income countries. Working with Gavi and UNICEF, he’s deploying comprehensive solar power—not just for vaccine refrigerators, but for entire primary-care facilities. The program covers 1,300 facilities across Zambia, Ethiopia, Uganda, and Pakistan.

## Bob Keefe

**EXECUTIVE DIRECTOR  
E2**

Bob Keefe leads E2, a national, nonpartisan group of over 11,000 business owners, investors, and entrepreneurs advocating for policies that protect the environment and aid the clean-energy transition. Keefe has grown E2’s reach across the U.S. and played a role in passing federal and state climate and clean-energy policies like the California Clean Car Standards, the nation’s first legislation to limit global warming emissions, and Cap-and-Trade Program. “We all need to do a better job of understanding and communicating the economic costs of climate inaction and the economic benefits of climate action,” he says.



## Kathy Hochul

**GOVERNOR  
NEW YORK**

In 2025, New York Governor Kathy Hochul introduced New York City’s congestion-pricing program, the first such initiative in the U.S. In its first six months, the toll reduced traffic in the busiest parts of Manhattan by 11%, pushed public-transit use to new highs, and boosted the local economy. It’s expected to raise \$500 million by the end of 2025 to help fund mass-transit upgrades. She says there’s more ahead: “We are not waiting on the federal government. We are taking matters into our own hands to ensure a cleaner and greener environment and economy.”





**Luiz Inácio Lula da Silva**

**PRESIDENT  
BRAZIL**

Since being elected President in 2022, Luiz Inácio Lula da Silva has worked hard to transform Brazil into a climate leader. And on many fronts, he has succeeded. This includes cracking down on illegal deforestation, bringing it to the lowest levels seen in a decade. He has also helped pioneer the government's Tropical Forests Forever Facility, a \$125 billion fund aimed at preserving tropical forests while giving investors a financial return. Brazil also now has one of the world's cleanest electric grids. Hosting this year's annual U.N. climate summit in the Amazon is seen as a feather in the cap of these efforts.

**Justine Johnson**

**CHIEF MOBILITY OFFICER  
MICHIGAN**

As Michigan's chief mobility officer, Justine Johnson oversees state-level efforts to boost clean transportation by bringing together government, academia, startups, and industry. This includes building the country's first wireless EV-charging road in Detroit in 2023. At the end of last year, a deal was inked between wireless EV-charging specialist Electreon and commercial EV manufacturer Xos to make the technology available for commercial vehicles, including UPS trucks. "Governments should create statewide or multistate lending programs that back climate innovators developing hard tech," Johnson says of supporting more such local efforts.



**Alok Sharma**

**CHAIR  
TRANSITION FINANCE COUNCIL**

Alok Sharma is at the center of the United Kingdom's push to become a sustainable-finance superpower. As the inaugural chair of Britain's Transition Finance Council, a role he was appointed to this year, he is charged with maneuvering among government, industry, and the financial sector to get money flowing toward decarbonization. Crucially, he has focused the council on setting credibility standards—time-bound targets, transparent disclosures—to give investors confidence. "Britain is open for business," he says. "We are a very established market, but you can't sort of sit there and rest on your laurels."

**Kevin Rabinovitch**

**CHIEF CLIMATE OFFICER  
MARS**

Mars—the company behind everything from Pedigree pet food to M&Ms—wants to cut emissions by 50% by 2030. Leading the charge is Kevin Rabinovitch, global VP of sustainability and chief climate officer for the brand. On his watch, Mars made a five-year, \$27 million investment this year to incentivize farmers to reduce dairy-farming carbon emissions. Also in 2025, the company launched its Mars Sustainable Investment Fund, a \$250 million pot that aims to provide financial support for companies developing climate solutions, including developing ingredient alternatives with lower emission footprints.

**Anne-Cécile Violland**

**MEMBER OF PARLIAMENT  
FRANCE**

The fashion industry, responsible for up to 10% of total global CO<sub>2</sub> emissions, shows no sign of slowing down. In an effort to get things under control, in 2024, French politician Anne-Cécile Violland proposed a national bill to target sources of "ultra" fast fashion, including Shein and its rival Temu. If passed, the law would make France—home of haute couture—the first major economy to take on these clothing giants. It would impose a surcharge of up to €5 on French shoppers purchasing from ultra-fast-fashion sites, which will rise to €10 by 2030.



LULA: TON MOULNA—NURPHOTO/GETTY IMAGES; SHARMA: DAVID LEVISON—GETTY IMAGES; VIOLLAND: ERIC TSCHAEN—REA/REDFIX



**Mary Schapiro**

**VICE CHAIR, GLOBAL PUBLIC  
POLICY  
BLOOMBERG**

Mary Schapiro is spearheading numerous global initiatives on smart climate-transition finance through her many leadership roles. Among these is helping to establish the Brazil Climate and Ecological Transformation

Investment Platform. But as powerful as finance is, she says it's no substitute for government action. "I'd rather see fewer announcements at [this year's COP30 climate conference], but ones that reflect a more persistent and concrete commitment to action grounded in the need for this work to drive economic opportunity for all people."

## Douglas McMaster

CHEF AND FOUNDER  
SILO

CHEF DOUGLAS MCMASTER IS THE CREATIVE mastermind behind Silo, the world's first zero-waste restaurant. The London-based institution, which recently celebrated its 10th anniversary, prides itself on not having a garbage bin: goods are delivered in reusable or returnable containers, while food scraps are composted or fermented. Food waste is a key contributor to climate change because it gives off greenhouse gases like methane as it decomposes in landfills. The amount of food waste Silo has transformed over the past decade could fill more than 3,500 double-decker buses. In late 2024 McMaster and his team launched the "Fermentation Factory," which supplies other chefs in the industry with the ingredients and know-how to turn food waste into new products. McMaster answered TIME's survey on the state of the climate movement.

**What is the most important action the world needs to take in the next year to advance climate action?** Regenerative, natural farming is where it begins. Healthy, fertile soil is the foundation—without it, neither our food nor our own health can truly thrive.

**What's one sustainability effort you will personally adopt in the next year?** Trying to achieve zero waste while having a newborn baby boy.

**What is a climate solution that isn't getting the attention or funding it deserves?** Rewilding, agroforestry, and syntropic farming are some of the best ways we know to soak up carbon while also growing nourishing food and bringing back biodiversity. Planting trees is beautiful, but planting whole ecosystems is how we truly find our way back to nature.

**What gives you hope about the future of the planet?** I believe that we are going to experience huge environmental and economic collapse, which might seem negative, but it's going to be the lesson we need to ameliorate our relationship with the natural world.

**If you could stand up and talk to world leaders at the next COP, what would you say?** Before any action, it's wise to have the right worldview. Ask simply: What does nature want? When we see that we are not separate from nature, but part of it, we begin to design it back into our lives.



Nature is a zero-waste system, a guiding principle. It doesn't recognize or welcome glyphosate, so let that guide it out of our farming. Nature created the most diverse ecosystem inside our gut—nurture it with fermentation. Listen to birdsong and let it calm your nervous system. Gaze into the fractal geometry of a weeping willow. Breathe in the microbiome of an ancient forest. Refuse the single-use coffee cup. Buy nothing new for a year. See technology as a tool, not a religion. The more we dissociate from nature, the more we suffer. So let's design it back into our lives.



**Titouan Bernicot**

**FOUNDER  
CORAL GARDENERS**

Growing up in French Polynesia, Titouan Bernicot saw firsthand the degradation of coral reefs. In 2017, at just 18, he created Coral Gardeners, an ocean-conservation group to restore reefs. The group cultivates and transplants corals to damaged reefs; it has planted over 100,000 corals in French Polynesia, and aims to have 1 million planted globally by the end of 2025. To help, Coral Gardeners has developed AI systems that analyze ecological data to monitor reef health, predict environmental threats, and plan effective conservation strategies.

**Gina Friel**

**DIRECTOR  
GLOBAL NURSES WORKING GROUP**

“Nurses are an essential force for protecting those at risk for climate-related health impacts,” says Gina Friel, a pediatric nurse practitioner and nurse organizer. This thinking has helped her educate health care professionals around the world on how best to treat climate-vulnerable patients. Thanks to her leadership, Columbia University’s Global Consortium on Climate and Health Education recently launched a free virtual course on the topic, which has so far enrolled more than 3,000 nurses from across six continents.

**Riccardo Stefanelli**  
**CEO  
BRUNELLO CUCINELLI**

Under Stefanelli’s leadership, the luxury fashion company is restoring Himalayan pastureland to support local cashmere artisans. In the first half of 2025, the project’s economic impact totaled more than \$460,000.

**Omoyemi Akerele**  
**FOUNDER  
LAGOS FASHION WEEK**

In the 15 years since Akerele founded Lagos Fashion Week, it’s become the continent’s largest fashion event. Participating designers must meet sustainability criteria on sourcing, production, and logistics. In the past year she’s also advanced circular-fashion innovation across Africa.

**Samir Ibrahim**  
**CEO  
SUNCULTURE**

Africa’s largest agro-solar systems provider uses off-grid power to boost crops and save water. CEO Ibrahim says: “[We] must focus on scaling technology that already works. The climate can’t wait for perfect; we need progress now.”

**Jean-Baptiste Massignon**  
**MANAGING DIRECTOR  
ECOBEAUTYSCORE  
ASSOCIATION**

The nonprofit created the first industry-wide, science-based environmental scoring system for cosmetics in March. The tool is now used by major brands like L’Oréal Paris, Neutrogena, and Garnier.



**Meg Marinis**  
**SHOWRUNNER  
GREY’S ANATOMY**

After being promoted to showrunner for the medical drama *Grey’s Anatomy* in 2024, Meg Marinis worked with the Natural Resources Defense Council to create a gripping episode about a deadly heat wave—putting the climate crisis in front of millions of prime-time viewers. But she’s not stopping there. The show is now collaborating with Rivian to create an electric ambulance to be featured in episodes. “Ambulance/EMS vehicles are among the most ... heavily polluting vehicles,” she says. The hope is to educate the public to push for change.

**Jens-Peter Saul**

**CEO  
RAMBOLL**

As head of sustainable-engineering firm Ramboll, Jens-Peter Saul is spearheading climate-resilient urban design. This includes transforming Copenhagen into a “sponge city” and last year creating Asia’s first citywide “cloudburst masterplan” in Malaysia—using strategic drainage like sewers and rain gardens to prevent floods. “The biggest transformations often occur in those parts of the economy that few people pay attention to,” he says. He is now helping to repurpose a former coal plant in New York State into a low-carbon data center.

**DJ Alok**

**MUSICIAN**

Alok Achkar Peres Petrillo, better known as DJ Alok to his fans, is the most-streamed Brazilian artist internationally. He has more than 7.3 billion Spotify streams and an audience of more than 85 million on social media. But in recent years, he’s focused his music on an important cause: supporting Indigenous rights and the protection of the Amazon rain forest. By collaborating with more than 50 Indigenous musicians on his latest album and donating the proceeds and royalties to their communities, he’s enabling fans to combat the biodiversity crisis in the Amazon, simply by listening.

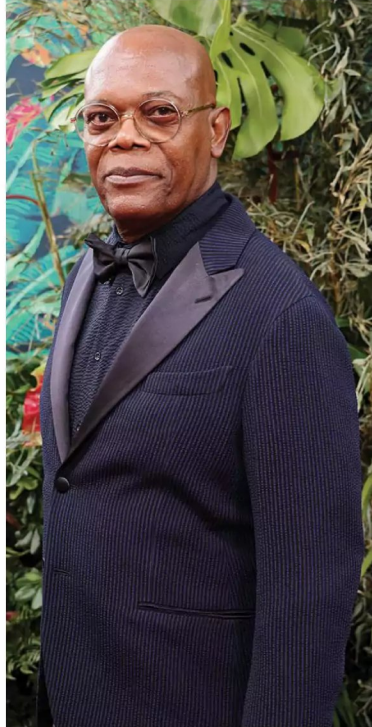


BERNICOT: COURTESY; ROLEX; MARINIS: TYSON; DJ ALOK: VALERIE MAOON—APP/GETTY IMAGES; JACKSON: KEVIN MAZUR—TONY AMAROSI/GETTY IMAGES; BOENEME: JI GEIGER—THE NEW YORK TIMES/REDUX

## Samuel L. Jackson

ACTOR

Samuel L. Jackson's recent attention-grabbing role wasn't in a blockbuster film, but a 60-second ad in July for Vattenfall—a Swedish company that built an 11-turbine wind-power project within view of President Donald Trump's Scotland golf course. "These giants are standing tall against fossil fuels, rising up from the ocean like a middle finger to CO<sub>2</sub>," Jackson said. Though he wasn't mentioned by name, the viral ad was seen by many as a tongue-in-cheek nod to Trump's anti-wind-farm stance, and reached 600 million viewers across 33 countries within four days of its release.



***'I see people understanding that climate justice is intertwined with health, equity, and dignity.'***

—Meg Marinis



## Riley Duren

FOUNDER AND CEO  
CARBON MAPPER

An alumnus of NASA's Jet Propulsion Laboratory, Riley Duren founded Carbon Mapper in 2020 as a free tool to monitor greenhouse-gas emissions using satellite data. Last year, the nonprofit helped spot and stop

a major methane leak in the Permian Basin. This September it announced a partnership with the government of Kazakhstan, the Global Methane Hub, and the Clean Air Task Force to monitor and regulate methane emissions from industries like oil and gas. And it plans to launch three new satellites next year. "When people have the right information," Duren says, "they can act decisively and effectively."

## Curtis Robinhold

EXECUTIVE DIRECTOR  
PORT OF PORTLAND

Curtis Robinhold oversees the \$2 billion project to renovate Portland (Ore.) International Airport with a mass timber frame and energy-efficient upgrades. He's now calling for airports globally to scale up green aviation fuel in order to cut emissions.

## Greg Chasen

FOUNDER  
CHASEN ARCHITECTURE

Chasen promotes wildfire-safe home design, including exterior borders free of flammable items, double-paned windows, and fewer attic vents. He gained attention this year when a home he designed survived the L.A. wildfires.

## Joe Murphy and Joe Robertson

CO-FOUNDERS  
GOOD CHANCE THEATRE

Playwrights Joe Murphy and Joe Robertson are co-founders of Good Chance Theatre, which this year put out the hit play *Kyoto*—an unexpectedly gripping account of the 1997 climate negotiations in Japan. The show ran in London's West End for 16 weeks to sold-out audiences, and in October made its U.S. premiere at New York City's Lincoln Center. "Art that humanizes the climate crisis in surprising and dramatic ways is in itself a climate solution," the two say.



## Michele Uva

EXECUTIVE DIRECTOR FOR SOCIAL AND ENVIRONMENTAL SUSTAINABILITY  
UEFA

Thanks to Michele Uva's leadership, the Union of European Football Associations (UEFA) incorporated sustainability into the strategic planning for the 2024 European Football Championship in Germany, the world's third largest sporting event. Free and discounted transportation between venues resulted in fewer than 5% of spectators traveling to matches in their own cars, and UEFA is installing solar panels and EV charging stations across Germany's clubs. The event has become a model for other multivenue events around the globe.

## Isabelle Boemeke

FOUNDER  
SAVE CLEAN ENERGY

Isabelle Boemeke is a Brazilian fashion model and influencer using her online persona, Isodope, to educate young people about how nuclear energy can help solve the climate crisis. Last fall, Boemeke and her husband donated \$5 million to boost nuclear energy by 50 gigawatts globally by 2030. Her new book *Rad Future* was released in August. It's time to "embrace the science and build the rad future we need—one of energy abundance, not scarcity," she says.



## Charlot Magayi

FOUNDER AND CEO  
MUKURU CLEAN STOVES

WHEN A TRADITIONAL COOKING STOVE LEFT HER toddler with life-threatening burns, Charlot Magayi turned grief into resolve. From Nairobi's Mukuru slum, she set out to reinvent the stove, and in doing so reimagined how families cook and breathe. "What began as my attempt to protect my own child has grown into a mission to protect millions [from pollution]," she says. Magayi founded Mukuru Clean Stoves in 2017. Her \$10 stoves, which use less charcoal, cut household air pollution by 90% compared with traditional cooking stoves. They have reached more than 600,000 households, reducing air pollution and an estimated 930,000 metric tons of CO<sub>2</sub>. The company counts Michael Bloomberg among its advisers. In 2024, Mukuru launched a new factory and unveiled mosquito-repelling cooking fuels that reduce both smoke and malaria transmission.

A 2022 Earthshot Prize winner, dubbed the "Queen of Africa" by Prince William in 2024, Magayi says her greatest reward comes from seeing her company's impact on real lives: "When a mother shares that her children are healthier because her home is free from smoke, or when a young woman tells me her income from stove sales is helping her put healthy food on the table, that is the recognition that truly matters," she says. By 2030, she envisions reaching 10 million people across the continent, the culmination of a journey started over her own stove. Magayi answered TIME's survey on the state of the climate movement.

**What is a climate solution that isn't getting the attention it deserves?** Reforestation and nature-based carbon projects led by local women's cooperatives are severely underfunded. These women protect forests, restore degraded lands, and sustain ecosystems, but rarely access direct funding or ownership of carbon assets. Financing women-led reforestation efforts would not only accelerate carbon sequestration but also ensure climate justice by empowering the very communities most affected by climate change.

**What gives you hope about the future of the planet?** I'm deeply inspired by the growing wave of young African innovators solving local problems with global impact, from renewable energy to sustainable agriculture. They remind me that climate action is not charity, it's creativity, courage, and community in motion.

**If you could stand up and talk to world leaders at the next COP, what would you say?** Stop talking about inclusion, fund it. The world cannot achieve net-zero while 2.3 billion people still cook over open fires. Climate finance must reach grassroots innovators, women, and local enterprises working on the front lines. We don't need more pledges; we need partnerships that trust local capacity and channel resources to where they will save both lives and the planet.





**Henry Fernandez**  
CHAIRMAN AND CEO  
MSCI

Fernandez heads MSCI, an influential provider of corporate climate data through tools like the Energy Transition Framework, launched in June. To meet emissions targets, “the finance and investment industries have a critical role to play,” he says.

**Constantine Komodromos**  
FOUNDER AND CEO  
VESSELBOT

Komodromos founded VesselBot to help companies visualize emissions across their supply chain. “When emissions reduction improves operational performance, momentum becomes self-sustaining,” Komodromos says.

**Andrea Rocchetto**  
CEO  
EPHOS

Rocchetto co-founded Ephos, one of the first companies to make glass photonic quantum computing chips, which move data with light and, Rocchetto says, are 20 times more efficient than their silicon counterparts.

**Kyle Clark**  
FOUNDER AND CEO  
BETA TECHNOLOGIES

In June, Clark’s Beta Technologies became the first to land an electric passenger plane at JFK airport, flying around 70 miles with occupants. Short-haul electric flights could reduce congestion and fuel costs compared with gas helicopters.



**Gustav Hasselskog**

CEO  
CANDELA

Gustav Hasselskog founded Candela to innovate electric vessels. The hydrofoil design reduces drag and energy use, unlocking long-range battery-powered water travel. Candela’s 30-passenger P-12 Shuttle, launched last year, cut commuting times in Stockholm while emitting 95% less CO<sub>2</sub> than the city’s diesel-powered vessels. Candela will bring P-12 to India and Thailand next. “Governments must level the playing field. Across transport and energy, governments still subsidize diesel and kerosene, while electricity is taxed like luxury consumption,” he says.

**Jinghong Qian**

CO-FOUNDER  
YADEA

**China already leads in exploring alternatives to lithium-ion batteries. In January, Yadea—the world’s biggest electric-scooter maker, founded in 2001 by Jinghong Qian and her husband—launched a Vespa-like two-wheeler powered by batteries made from sodium, the abundant element found in table salt. Sodium batteries are typically cheaper and safer than lithium ones, but trail in energy density. However, larger-capacity designs are advancing rapidly, paving the way for wider adoption. Yadea is rolling out a massive scooter-charging network in China, starting in Hangzhou.**

**Darren Crouch**

BOARD PRESIDENT  
GREEN BURIAL COUNCIL

Darren Crouch co-founded environmentally responsible funeral-product company Passages International and is board president of the Green Burial Council, which is helping the death-care industry adopt more eco-friendly practices. What began as a fringe idea is now reshaping how cemeteries, funeral homes, and suppliers approach sustainability, with a certification system that keeps greenwashing in check. Crouch has since worked directly with funeral providers to shift the industry’s mindset from “Why should I?” to “How do I?”



## Jennifer Preston

CEO  
KREISEL ELECTRIC

In February, John Deere announced its first lineup of electric-powered tractors, which could reshape the agriculture industry. Overseeing this development is Jennifer Preston, CEO of battery developer Kreisel Electric. (Deere has majority ownership.) The new E-Power tractors aren't intended to fully replace diesel models, but to complement them. Geared toward work in orchards, vineyards, and municipalities, as well as with livestock, the tractors are modular, so farmers can remove and replace batteries as needed. They're expected to reach the consumer market by early 2026.

## Douglas Johnson-Poensgen

PRESIDENT AND FOUNDER  
CIRCULOR

In January the E.U. will begin requiring every EV and industrial battery sold there to carry a digital passport—a QR code with proof of origin, performance, and component-sourcing information for consumers, retailers, and manufacturers. The Volvo XC90 last year became the first vehicle with the passport, and today an estimated 2 million battery passports are now in use, according to Douglas Johnson-Poensgen, president and founder of Circulor, a software developer that provides the QR passports to companies. So far, Circulor has collected 2.8 billion scans for information. “Often the small, unglamorous changes have the biggest impact on people’s daily lives,” he says.

## Maxim Timchenko

CEO  
DTEK

Maxim Timchenko leads Ukraine’s largest private energy company, DTEK. In 2024, Russian strikes crippled DTEK’s infrastructure, causing widespread blackouts. This year it’s invested heavily to expand renewables—including Ukraine’s largest wind farm and one of the biggest battery-storage projects in Eastern Europe. With Octopus Energy it launched a program to finance 100 commercial solar and battery projects across Ukraine to stabilize the grid and lower electricity costs. “If we can build [this],” he says, “in the middle of a war—then change is possible anywhere.”



## Eef Brouwers

CO-FOUNDER  
NORTH SEA FARMERS

Seaweed sucks carbon dioxide from the atmosphere, making it a promising climate solution. Eef Brouwers, co-founder at North Sea Farmers, wants to prove seaweed farming can be done at scale. It launched the world’s first commercial-scale seaweed farm to be situated among a field of offshore wind turbines, along the coast of the Netherlands. Farmers made their first harvest this summer. The project not only demonstrates the commercial viability of co-locating seaweed and wind farms, but will also provide important research on seaweed’s carbon-sequestering capabilities.

## Al Subbloie

FOUNDER AND CEO  
BUDDERFLY

Al Subbloie’s Budderfly offers energy-management services, like smart HVAC, advanced controls, and real-time energy monitoring, to help systems run more efficiently. Budderfly is developing virtual power plants that will allow it to remotely orchestrate energy from distributed off-grid sources like batteries or solar panels and shift loads between small business franchises like McDonald’s, Orangetheory, and Applebee’s, which could reduce the amount of energy they pull from the grid at peak times. In 2024, it helped clients save over 155 million kWh of energy.

## Nan Ransohoff

HEAD OF CLIMATE  
STRIPE AND  
FRONTIER

“We tend to underestimate how fast progress can happen,” says Nan Ransohoff, Stripe’s climate head. She’s spearheaded its Frontier experiment, where Stripe and other companies committed a pooled \$1 billion to buy credits from permanent carbon-removal startups. Frontier prepurchases contracts from early-stage ventures that take effect as they deliver verified carbon removal. Guaranteed customers could help finance and develop the startups’ operations. The idea



borrowed from how government and philanthropic funding encourages pharmaceutical

companies to develop vaccines and medicines for low-income countries.

## Varun Sivaram

FOUNDER AND CEO  
EMERALD AI

America's power grid is under enormous strain—a problem compounded by the AI boom's energy demands. But Varun Sivaram says the solution to AI's strain might actually be AI itself. "Far from undermining the grid," he says, "AI could actually save it." In July, he launched Emerald AI to help data centers become more flexible in their energy consumption, particularly in periods of peak demand. In a test run on a hot May afternoon in Phoenix, its software helped an Oracle data center drop power consumption by 25%. With \$24.5 million in seed funding, he secured an additional \$18 million in October.



**'AI's demand for energy is forcing us to build a smarter grid.'**—Varun Sivaram

## Michael Walker

CEO  
STAX ENGINEERING

Under the guidance of CEO Michael Walker, Stax Engineering has quickly become a leader in cleaning up shipping ports since its 2024 launch. Its exhaust-capture technology can attach to all major vessel types to remove over 95% of particulate matter and nitrogen oxides—types of pollution known to be harmful to human health. "We must find an economical way to move the needle with solutions that work with market forces, not against them," he says. This year Stax became the first approved emissions-control provider for vessels docked in the Port of Los Angeles. It's now exploring expanding into CO<sub>2</sub> capture and control.

### Jonathan Shaw CEO NURU

"Companies should consider the climate impacts of extracting the critical minerals their infrastructure is built upon. Africa's role in the AI revolution is real and the climate impact of AI extends far beyond the electrons powering an Artificial General Intelligence."

### Taner Karacan MANAGING DIRECTOR SVEA SOLAR GERMANY AND BELGIUM

"The technology for a clean future exists, and people are ready to act. World leaders must remove barriers, simplify regulations, and invest in infrastructure so solar and smart energy can scale fast."

### Landon Mossburg CEO AND CO-FOUNDER PEAK ENERGY

"Renewables generation has advanced rapidly, but without infrastructure that can balance variability and store surplus power, we risk slowing the clean-energy transition by failing to utilize the total power we can generate."



## Todd Bandhauer

CO-FOUNDER AND CTO  
ATMOSZERO

As co-founder and CTO at AtmosZero, Todd Bandhauer has been instrumental in developing an electric heat pump that can replace gas boilers in food, paper, textile, and other industries, saving energy and cutting emissions. He hopes "utilities and your local government work to address burning of fuels for industrial heat by providing more incentives to switch to electricity." This year Colorado's New Belgium Brewing became the first company to install AtmosZero's heat pump. In February, AtmosZero opened a new facility that can manufacture 100 units per year.

## Lei Zhang

CHAIRMAN  
ENVISION

Lei Zhang is the chairman of Envision, a provider of renewable energy solutions for businesses, governments, and institutions that uses AI to effectively orchestrate energy systems it manages. In the past year, it launched the world's biggest green hydrogen and ammonia plant in Inner Mongolia, and is set to replicate a similar plant in Brazil. Envision is also helping develop a gigawatt-scale wind farm in Egypt. "The transition to renewables is not optional—it's essential," he says.

## Stephen Lake

CO-FOUNDER AND CEO  
JETSON HOME

Homes are a significant source of emissions thanks partly to fossil-fuel-based furnaces. While heat pumps are a much cleaner alternative, their cost can be prohibitive. Stephen Lake's Vancouver-based startup, Jetson Home, has cut those costs roughly in half by eliminating markups along the heat pump value chain and simplifying installation. "If the easiest and most affordable choice for a family or business is also the climate-smart one, people will naturally make that switch," he says. In September, Jetson debuted its Jetson Air heat pump, the industry's first fully integrated smart home heat pump platform.



## Pawan Munjal

EXECUTIVE CHAIRMAN  
HERO MOTOCORP

India is the world's largest motorcycle market, with an estimated 260 million registered, and is pushing to transition to electric ones rather than gas. Hero MotoCorp, the country's biggest maker of two-wheelers, wants electric motorcycles to make up 25% of its sales in 2026, up from 10% in 2024. Under executive chairman Pawan Munjal, it introduced multiple electric-powered motorcycles in the past year, with improved range, affordability, and battery life. It also launched an initiative to improve infrastructure like charging, battery swapping, and more.



## Nick Carter

CEO  
AKAYSHA ENERGY

NICK CARTER'S AKAYSHA ENERGY IS BRINGING MEGA-scale battery energy-storage systems online to support the energy transition. The company's Waratah Super Battery, located outside of Sydney, came online in 2025 and will be the world's most powerful when fully operational. It stores excess renewable energy that can be discharged immediately, stabilizing the local grid during extreme weather and power outages. The project has generated over \$1 billion in local economic investments since construction began in 2023.

**What is the single most important action you think should be taken in the next year to advance the climate agenda?** The single most important thing that any government in any country can do is to reach a bipartisan position on climate action and the associated energy transition. This issue is too big and critical not to have a bipartisan stance; otherwise, it is impossible to solve economically and technically in a socially equitable way.

**What is a climate solution that isn't getting the attention or funding it deserves?** One issue that often receives insufficient attention is the deregulation and opening up of energy markets across several areas. For example, opening up electrical grid transmission and distribution to private investment, including the competitive tending of grid services; opening up all market and network data in

an open-source way to allow all private businesses to use this data to create new retail and commercial energy business models; and general deregulation of energy markets to reflect the true costs and benefits of all technology types across generation, storage, and transmission.

**What gives you hope about the future of the planet?** I have hope, which is based on humans' ability to apply technology to solve issues, but I'm also constantly surprised at humans' ability to adapt. I'm also constantly blown away by nature's way of adapting and being resilient. If we combine all these elements, we may just be able to save the planet from the worst-case scenarios.

**If you could stand up and talk to world leaders at the next COP, what would you say?** There is so much that governments and policymakers can do, but they are not doing it, and we are slipping. Everyone needs to get aligned, not just in an intracountry way, but in an inter-regional and global way. Stop fighting and get aligned for the common good. We need a global carbon platform and market. We can't keep assuming that dumping man-made greenhouse gases is free or has no consequence. Partly, this is due to the crazy ideology that dominates [discussion of] climate change, which is fueled by a deep distrust of science and scientists.



### **Eric Li**

**FOUNDER  
GEELY HOLDING GROUP**

The hottest-selling car in China this year, whether electric- or gas-powered, is not a Tesla or a BYD. Instead, it's a compact EV from Eric Li's auto-manufacturing giant

Geely. The Xingyuan model dominated China's crowded and competitive car market, selling almost 350,000 units by October at less than \$10,000 each. It's just one part of Geely's success—by the first half of 2025, it had sold 1.4 million vehicles, which allowed the firm to take more than 10% of the Chinese market share for the first time. About half of those are new-energy vehicles as Chinese buyers gravitate to local EV brands.

### **King Charles III**

**MONARCH  
UNITED KINGDOM**

King Charles has long been an outspoken climate advocate. In 2024, he hired a head of sustainability to improve the royal family's carbon footprint and announced plans to make the royal family's Sandringham Estate solar powered, submitting proposals for a 2,000-panel installation, and set "environmental sustainability" as one of the themes that will guide royal engagements. His Sustainable Markets Initiative, founded in 2020, has meanwhile grown into one of the world's most influential CEO-led climate coalitions, mobilizing trillions of dollars for climate solutions.

### **Robin Zeng**

**FOUNDER AND CHAIRPERSON  
CATL**

Robin Zeng's CATL—the world's biggest EV and energy-storage battery manufacturer, commanding almost 40% of the global market—is eyeing European expansion. In September, CATL unveiled a lithium iron phosphate battery to alleviate concerns over EV cost, efficiency, lifespan, and safety. One version has over 470 miles of range; another needs just 10 minutes of charge to reach 297 miles of range. Its Hungarian gigafactory will kick off production in 2026.

### **Bill Winters**

**CEO  
STANDARD CHARTERED**

Big banks have been pulling back on their climate commitments. But at Standard Chartered, CEO Bill Winters is staying the course. Under his tenure, it has pioneered innovative tools to address some of the trickiest conundrums in the climate-finance landscape—from adaptation finance to carbon markets. In January, the firm declared it would earn over \$1 billion in revenue from its sustainability business in 2025. "We do the right thing, and we get paid for it," Winters told the World Economic Forum. He is a key voice calling for the financial sector to do more to tackle climate change.

### **Ngozi Okonjo-Iweala** **DIRECTOR-GENERAL WORLD TRADE ORGANIZATION**

The WTO's fisheries-subsidies agreement took effect in September, but she says it's just the start of what's needed: "\$2 trillion in harmful subsidies every year distort trade, support illegal fishing, encourage fossil-fuel use."

### **Ola Kallenius** **CEO MERCEDES-BENZ GROUP**

Three years ago, Mercedes-Benz hit carbon-neutral production. And in October 2024, it opened Europe's first battery-recycling plant with an integrated mechanical-hydropneumatic process, recycling 96% of EV-battery materials.

### **Doug Field** **CHIEF EV OFFICER FORD MOTOR CO.**

Doug Field is leading a team at Ford designing a new low-cost EV—a mid-size electric truck that's set to cost around \$30,000 and debut in 2027. Ford is giving its Louisville, Ky., factory a \$2 billion upgrade to build it.

### **Rick Wilmer** **PRESIDENT AND CEO CHARGEPOINT**

ChargePoint's 1.25 million charging ports make it one of the world's largest EV-charging networks. Wilmer says, "Electrification is a tipping point for systemic decarbonization across all industries and teaches lessons [for reaching] a zero-emission future."

### **Evan Spiegel**

**CO-FOUNDER  
SNAP**

When wildfires swept through Los Angeles in January, Snap co-founder Evan Spiegel was among those who lost their homes in the Pacific Palisades. The loss spurred him to action. Spiegel, his co-founder Bobby Murphy, and the company distributed a combined \$5 million in immediate aid in January. In February, he co-founded the Department of Angels, a nonprofit aimed at ensuring that fire-impacted communities in L.A. can take charge of their recovery. It bridges community organizing and policy advocacy to provide a support system for survivors navigating the rebuilding process.

### **Lukas Walton**

**FOUNDER AND CEO  
BUILDERS VISION**

For over a decade, Lukas Walton has used his own wealth to quietly make \$15 billion in investments aimed at delivering both environmental and financial returns. Even for the Walmart heir, 39, it's an enormous sum, representing close to half of his estimated \$40 billion net worth. With that pool of capital, Builders Vision, which he created to manage those investments, has backed everything from sustainable seaweed farming to clean-energy projects in historically marginalized communities. This summer, he shared details of those investments for the first time.

### **Maria Grazia Davino**

**REGIONAL MANAGING  
DIRECTOR  
BYD EUROPE**

In April, Chinese auto-maker BYD overtook Tesla as Europe's top-selling EV brand, and Maria Grazia Davino is steering that transformation. Under her watch, BYD's European sales have skyrocketed 225% year over year, with more than 13,500 new vehicles registered in July alone. The company is now building its first European manufacturing hub in Hungary, with a second planned in Turkey. Her success underscores a new reality: the road to Europe's green future now runs through Shenzhen.





**Pope Leo XIV**

**LEADER  
CATHOLIC CHURCH**

Pope Leo XIV has made no delay in picking up the climate mantle of his predecessor, Pope Francis. He struck a deal in July to build a solar farm north of Rome and inaugurated a 135-acre ecological-training center in the gardens of Castel Gandolfo that will focus on sustainable farming. Then, in October, Leo urged individuals to demand climate action. “Citizens need to take an active role in political decisionmaking at national, regional, and local levels,” he said. “Only then will it be possible to mitigate the damage done to the environment.”

**Sergio Díaz-Granados**

**EXECUTIVE PRESIDENT  
CAF-DEVELOPMENT BANK OF LATIN AMERICA AND THE CARIBBEAN**

As head of CAF, Sergio Díaz-Granados made waves last year when he helped El Salvador negotiate the biggest debt-to-nature swap, reducing the country’s debts in return for environmental commitments like conserving the Lempa River, a vital source of drinking water and hydropower. The \$1 billion deal, financed by JPMorgan Chase, serves as a model for other countries. In addition, CAF approved a record \$5.2 billion in funding in June to promote sustainable development. “Latin America and the Caribbean is a region of solutions,” Díaz-Granados says. “But we cannot bear the cost of protecting these global public goods alone.”



**Christine Lagarde**

**PRESIDENT  
EUROPEAN CENTRAL BANK**

Christine Lagarde, the French lawyer and former International Monetary Fund chief who has led the European Central Bank (ECB) since 2019, is taking a groundbreaking approach to fighting climate change by using financial pressure to encourage a shift toward cleaner business. When banks borrow from the ECB, they must put up assets as collateral. Under new 2025 rules, assets from high-pollution companies will be worth less as collateral, making lending to polluting industries more expensive for banks while potentially making it cheaper for green companies to borrow money.

**Cynthia Houniuhi**

**PRESIDENT  
PACIFIC ISLANDS STUDENTS FIGHTING  
CLIMATE CHANGE**

SOLOMON ISLANDS NATIVE CYNTHIA Houniuhi spearheaded a yearslong campaign that culminated in 2025 in a landmark advisory opinion from the U.N.’s International Court of Justice. Thanks to her leadership as head of Pacific Islands Students Fighting Climate Change, the court declared that wealthy countries have a legal obligation to protect the climate for future generations, and that they are even responsible for the actions of the private sector. The historic opinion, while not legally binding, opens a litigation pathway for big polluters to face legal consequences. Houniuhi, 31, answered TIME’s survey about the state of the climate movement.

**What is the most important action the world needs to take in the next year to advance climate action?**

Some countries are more ambitious than others when it comes to climate action. Now, in 2025, we have an authoritative direction from the International Court of Justice. All states—but particularly large emitters—must heed the court’s direction when it comes to Nationally Determined Contributions.

**What is a climate solution that isn’t getting the attention or funding it deserves?**

While we work on mitigation, countries need to survive and adapt. However, the support they are getting so far is not what they deserve.

**What gives you hope about the future of the planet?**

Young people give me hope. You go into UNFCCC [U.N. Framework Convention on Climate Change] COP processes and you can see consensus is not easy to achieve. You go into rooms where young people are and you see that they are able to unite under one campaign goal: to get an advisory opinion from the International Court of Justice. This highlights that a united world is possible.

**If you could stand up and talk to world leaders at the next COP, what would you say?** There were leaders before me, young people from frontline communities, that have time and time again spoken in these spaces about the urgency of the crisis and why climate action is in the best interest of everyone.



**Colby Hastings**  
**SENIOR DIRECTOR OF  
RESIDENTIAL ENERGY  
TESLA**

Hastings leads Tesla’s residential-energy segment, helping expand uptake of the popular Powerwall home battery systems. “Huge potential lies in the power of distributed energy resources to support our electrical grid,” she says.

**Esther Finidori**  
**CHIEF  
SUSTAINABILITY  
OFFICER  
SCHNEIDER ELECTRIC**

Finidori leads energy-management software maker Schneider’s sustainability efforts. Through June, she says, the company saved 700 million tons of CO<sub>2</sub> since 2018, and helped its suppliers reduce CO<sub>2</sub> emissions by 48%.

**Michael Terrell**  
**GLOBAL HEAD OF  
ADVANCED ENERGY  
GOOGLE**

Terrell aims to cut Google’s data-center emissions. He helped broker Nevada’s first “clean transition tariff” to add 115 MW of new geothermal power to the grid, and a flexible-demand model for a new data center in Arkansas.



**What will you do in your different capacities and roles to push for more ambitious climate action that aligns with the baseline provided by the International Court of Justice's advisory opinion on climate change? What would you do differently if you knew that the climate crisis will affect not just our communities, homes, livelihoods, and loved ones, but yours as well?**

We are only just passing through this world, and when we leave, I hope we all leave without fear and uncertainty about whether we left the world in a better place for future generations.

We are all in this together. Climate change is everyone's business.

## Rebecca Lindsey

**PROJECT DIRECTOR  
CLIMATE.US**

When the U.S. government's climate.gov website, operated by the National Oceanic and Atmospheric Administration (NOAA), was directed by the Trump Administration to stop publishing in July, and its remaining staff laid off, the site's weather and greenhouse-gas emission data and agricultural information—trusted by millions worldwide—was suddenly inaccessible. In an effort to save the valuable resource and keep vital climate data accessible to everyone, the website's former manager, Rebecca Lindsey, has launched and is operating an alternate nonprofit data website: climate.us.

## Edgar Villanueva

**FOUNDER AND CEO  
DECOLONIZING WEALTH PROJECT**

"For thousands of years, Indigenous peoples have practiced land stewardship rooted in reciprocity, balance, and respect, ensuring that a range of ecosystems can thrive," says Edgar Villanueva, whose Decolonizing Wealth Project (DWP) helps unlock funding for Indigenous-led climate and conservation solutions, like reforestation help to protect the Hamptons waterline in New York State. Since 2018, DWP has facilitated the distribution of nearly \$1 billion for over 270 tribes. In 2025, Villanueva launched a plan to catalyze \$1 trillion in reparative giving by 2035 to accelerate social and environmental progress.

## Ari Matusiak

**CO-FOUNDER, PRESIDENT, AND CEO  
REWIRING AMERICA**

**"Household upgrades are the fastest way to add capacity to the grid, lower costs for families, and reduce emissions," says Ari Matusiak, CEO of Rewiring America, an electrification-focused nonprofit that helped popularize heat pumps and other electric appliances by providing tools and education to homeowners to help them understand how to upgrade their homes and what federal incentives may be available to them. In September, Rewiring America partnered with BetterHVAC to launch a nationwide network connecting households with hundreds of vetted contractors who can implement electrification projects.**

## Yayra Agbofah

**FOUNDER  
THE REVIVAL**

Before founding the Revival, Yayra Agbofah was a second-hand trader at Kantamanto Market in Accra, Ghana, where more than 30,000 retailers sell the millions of used garments that have been shipped to the country from around the world. He launched his nonprofit in 2018 to repair and transform millions more low-quality and damaged clothing items that would have otherwise been landfilled, reducing CO<sub>2</sub> emissions—and hiring local workers to help as well. He's also partnered with global universities to develop courses to educate emerging designers about the perils of fast fashion.





**David Lu**  
CEO AND CO-FOUNDER  
CLARITY MOVEMENT

Poor air quality is the leading environmental threat to global human health. That's why David Lu developed a highly accurate, low-cost particulate-matter and nitrogen dioxide monitor. The solar-powered air-quality sensor is now used in over 70 countries.

**Mariangela Hungria**  
SENIOR RESEARCHER  
EMBRAPA BRAZIL

World Food Prize-winning agronomist and microbiologist Mariangela Hungria works with microbes to eliminate chemical fertilizers. "In the last soybean crop season in Brazil," she says, this work "helped mitigate 260 million tons of CO<sub>2</sub>."

**Peter Fernandez**  
EXECUTIVE CHAIRMAN  
MOMBAK

Under Peter Fernandez's leadership, Mombak is scaling carbon removal, inking deals with Microsoft in 2023 and Google in 2024. In April, it raised \$30 million in Series A funding that will help plant some 50,000 acres of forest in Brazil.

**Juan Carlos Monterrey Gómez**  
SPECIAL REPRESENTATIVE FOR  
CLIMATE CHANGE  
PANAMA

Panama's Nature Pledge is the first to unite several environmental targets under one framework. And now Colombia and the Dominican Republic are following in its steps.



**Penny Wong**  
FOREIGN AFFAIRS MINISTER  
AUSTRALIA

Previously the nation's first-ever Minister for Climate Change and Water, Penny Wong applies an environmental lens to her international-relations work. Wong helped implement the world's first "climate visa" program, the Falepili Union treaty, to allow Tuvaluans to move to Australia permanently to live, work, and study, while also guaranteeing Tuvalu's continued statehood and sovereignty. This summer, more than a third of Tuvalu citizens entered the first ballot selection for the visa. "We can only honor . . . current and future generations by acting together," she says.

**Sonam Wangchuk**

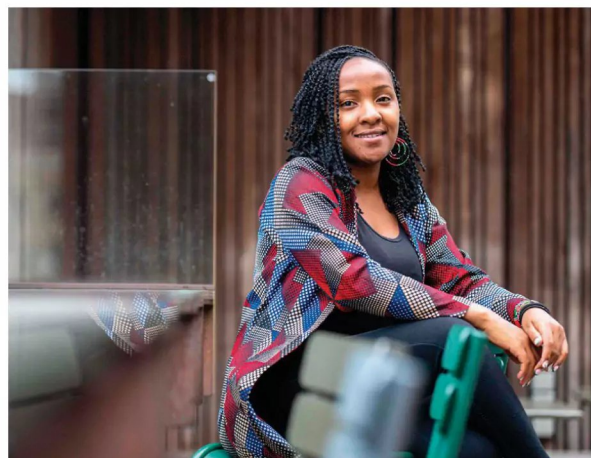
FOUNDER  
HIMALAYAN INSTITUTE OF ALTERNATIVES, LADAKH

Sonam Wangchuk has spent the past decade introducing new science to the ancient practice of grafting glaciers to grow new ice. It works by running pipes from glacier streams down into villages. During the winter, the water flows out and freezes into a multistory-tall conical artificial glacier fountain, or "ice stupa." As it melts, the ice stupa produces water to support farmers during the spring and summer. They've been deployed in Chile, Pakistan, and Nepal. This year, he launched "smart stupas" to more efficiently manage freezing pipes with a series of motorized valves.

**Elizabeth Wathuti**

FOUNDER AND CEO  
GREEN GENERATION INITIATIVE

Under Elizabeth Wathuti's leadership, the Green Generation Initiative is one of the fastest-growing youth-led, climate-focused organizations in Africa. Its work since 2024 has included planting and nurturing Indigenous trees and fruit trees across Kenyan schools, which boosted ecosystem health and food security. She has also supported young climate innovators and helped mobilize support for a global movement calling for a phaseout of fossil fuels. As she puts it, "Hope lives in those moments when people realize they, too, have power."



WATHUTI: JONAS ROOSENS—BEGA/AFP/GETTY IMAGES; MANKANI: RIZWAN TABASSUM—AFP/GETTY IMAGES

**Ronald Akili**

FOUNDER  
POTATO HEAD RESORT

Ronald Akili, founder of hospitality brand Potato Head in Bali's southern beach of Seminyak, operates on a "good times do good" motto, and the *desa* (village) he created has diverted about 99% of its waste from landfills as of this year. Last year, Akili also launched the Community Waste Project, a 23,000-sq.-ft. waste-processing facility, near the overfilled Suwung landfill. Since opening in October 2024, the project has so far processed 3.3 million lb. of waste. The vision is to have more facilities across the Indonesian island province.

**Dominique Browning**

DIRECTOR AND CO-FOUNDER  
MOMS CLEAN AIR FORCE

As head of nonprofit environmental advocacy group Moms Clean Air Force, Dominique Browning helped spearhead a campaign to support clean-energy and transportation investments in the 2022 Inflation Reduction Act—which the group is now working to defend. Her leadership has also helped secure funding for electric school buses and getting large retailers to commit to using renewable energy like solar panels in their stores. "CEOs of oil companies must step into the future," she says. "If they need inspiration, tell them to think about their children."



### **Neha Mankani**

**FOUNDER  
MAMA BABY FUND**

Pakistan is one of the countries most affected by climate change. It also has one of the world’s highest neonatal mortality rates. The Mama Baby Fund, founded by midwife Neha Mankani, sits at the intersection of these two crises. The nonprofit’s flagship solar-powered, midwife-led clinic on Baba Island provides climate-stressed mothers and babies with essential care, and remains operational during extreme weather and power outages. In the past year, Mankani’s clinic has hosted more than 4,000 prenatal visits, and the emergency fund has covered some 200 NICU hospitalizations for babies.

*‘What gives me hope is the creativity and resilience of frontline communities.’*

—Neha Mankani



### **‘Aulani Wilhelm**

**CEO  
NIA TERO**

‘Aulani Wilhelm leads Nia Tero, a Seattle-based nonprofit that supports Indigenous peoples’ guardianship of ecosystems. Since becoming the organization’s first

Indigenous CEO in January, she has grown it to become one of the largest supporters of Indigenous groups; this year, Nia Tero hit a milestone by awarding more than \$100 million in grants since its inception in 2017. The group has supported 274 Indigenous peoples across more than 300 million acres.

### **Josh Green**

**GOVERNOR  
HAWAII**

After wildfires devastated Maui in 2023, Hawaii’s Governor, Josh Green, knew the state needed to put more resources toward climate adaptation. He launched a special Climate Advisory Team to come up with solutions, and the group suggested a new tax on tourism. The resulting “green fee” was signed into law in May of this year and is expected to generate \$100 million annually for climate-resiliency projects. “Thanks to this policy,” he says, “when travelers visit Hawaii, they are helping to fund and support our entire state’s community health and resilience.”

### **Benji Backer**

**FOUNDER  
NATURE IS NONPARTISAN**

In July, President Donald Trump signed the “Make America Beautiful Again” Executive Order, which will establish a council to conserve public lands, protect wildlife populations, and expand access to clean drinking water. The perhaps surprising order was a result of a monthslong campaign led by Benji Backer, founder of the group Nature Is Nonpartisan, who first brought a draft to the White House in February. Backer launched the organization this year with the goal of making environmental conservation a less polarizing political issue.

### **Violet Sage Walker**

**CHAIRWOMAN  
NORTHERN CHUMASH TRIBAL COUNCIL**

Violet Sage Walker, chairwoman of the Northern Chumash Tribal Council, spent more than a decade working to create the Chumash Heritage National Marine Sanctuary, after learning that the coastal waters off central California were slated for oil exploration and seismic testing. The waters were officially protected last year thanks to a designation by the Biden Administration. Now, Walker is trying to acquire a sacred site—the Dos Pueblos Ranch—and return the land to the Chumash people, an effort that will honor the cultural heritage of the tribe and protect the ranch’s biodiversity.



# TIME 100/AI

On October 13, TIME gathered leaders shaping the future of AI at a TIME100 Impact Dinner to spotlight the innovators on the third annual TIME100 AI list and explore this transformative technology.

Experience more at: [time.com/time100-ai-impact-dinner](https://time.com/time100-ai-impact-dinner)



TOP ROW (L-R): STUART RUSSELL, PROFESSOR OF COMPUTER SCIENCE, UNIVERSITY OF CALIFORNIA, BERKELEY; NATASHA LYONNE, CO-FOUNDER, ASTERIA FILM CO.; REFIK ANADOL, MEDIA ARTIST AND CO-FOUNDER, DATALAND; KAKUL SRIVASTAVA, CHIEF EXECUTIVE OFFICER, SPLICE; BOTTOM ROW (L-R): JARED KAPLAN, CO-FOUNDER AND CHIEF SCIENCE OFFICER, ANTHROPIC; ATHINA KANIOURA, CHIEF STRATEGY AND TRANSFORMATION OFFICER, PEPSICO; RAVI KUMAR S, CHIEF EXECUTIVE OFFICER, COGNIZANT; NIKHIL KUMAR, EXECUTIVE EDITOR, TIME; CRISTIANO R. AMON, PRESIDENT AND CHIEF EXECUTIVE OFFICER, QUALCOMM; JESSICA SIBLEY, CHIEF EXECUTIVE OFFICER, TIME

THANK YOU TO OUR PARTNERS

PREMIER PARTNER



SIGNATURE PARTNERS



# Time Off



## FAMILY MATTERS

BY STEPHANIE ZACHAREK

A crop of fall movies search proverbial—and literal—attics to explore what makes a family unit tick

INSIDE

JENNIFER LAWRENCE GIVES HER BEST PERFORMANCE YET

A NEW TRUE-CRIME SERIES IMPLICATES ITS VIEWERS

EMMA THOMPSON ANCHORS A SOLID DETECTIVE DRAMA

**O**NE OF THE MOST GRIMLY FUNNY POEMS OF the past century is Philip Larkin's "This Be the Verse," with its opening salvo about how our parents invariably mess us up. Larkin used a saltier word for "mess," but you get the idea. Parents make us who we are, and if we have siblings, our parents' traits and legacies filter through the whole gang in various combinations. As Larkin wrote, "They fill you with the faults they had/ and add some extra, just for you."

All humans come from parents, people whose genetic stamp we carry whether we like it or not. And, perhaps excluding cases where those same people did not raise us, their faults inform us if not, as Larkin claimed, fill us. In the world of film, there have probably been as many movies about families as there are love stories. We're obsessed with family stories for good reason, though not all of them need to be loaded with trauma. This fall movie season, you might say we're exploring the subtler angles of how individual family members connect, or don't. A documentary in which a now famous son reflects on the lives of his famous parents; a triptych exploring slightly wacky parent-child relationships, from a filmmaker who has specialized in vibrant off-kilter comedies since the 1980s; and, from a leading Danish-Norwegian filmmaker, a delicate but potent picture that looks at the damage an absentee parent can wreak—though reconnection and reconciliation are always possible, even if only in baby steps. Maybe familial ties, in a world that most days seems to have gone horribly wrong, where each whipsaw news cycle brings another story about humans' inflicting cruelty on one another, are more important than ever. These films explore those bonds without ever resorting to bromides or mawkishness. Every family is flawed, unpredictable, aggravating in its own way—and still, they're often the thing that gets us through.

**GOING THROUGH DECADES' WORTH** of family possessions after the death of a parent is always a time for reflection, as well as the dumpster. Stuff tells a story, and actor, director, and producer Ben Stiller took the opportunity to make a documentary about his late parents, the ecstatically brilliant husband-and-wife comedy duo Jerry Stiller and Anne Meara, as he was cleaning out the New York City apartment where he and his sister, Amy, were raised. Jerry had a penchant for tape-recording everything, from adorable things his kids said to arguments with Anne. There were also piles of paper and documents, including love letters Jerry had written to Anne when they were struggling young performers, separated for months at a time. (Romance is how families get started, after all.) Ben and Amy Stiller went through it all to make *Stiller & Meara: Nothing Is Lost* (streaming on Apple TV+), reflecting on how their famous parents, rather than shielding their kids from the limelight, allowed them to step right into it: a clip of young Ben and Amy unskillfully sawing away at a violin duet on *The Mike Douglas Show*, as their parents watch, beaming, gives you a sense of the unfiltered pride Jerry and Anne took in their kids.

But Jerry and Anne also had work that took them away from home for long stretches, and in later life they



▲  
Waits in *Father Mother Sister Brother*: a dad with a secret

expressed regret over that. Stiller acknowledges that he now sees how he repeated the pattern with his own kids: like his father, he felt the need to hustle to keep his career and family afloat. Part of growing up is seeing your parents as real people with faults, but that recognition never happens in a flash, and it deepens with time. That's what Stiller reckons with here: not just that his parents did the best they could, but that who they were shaped him and his sister in granular ways that defy explanation—wobbly violin playing notwithstanding.

#### TREASURED INDIE FILMMAKER

Jim Jarmusch has also reached an age when he's ready to examine the warped world of parent-child, as well as sibling, bonds. In *Father Mother Sister Brother* (opening Dec. 24), he presents vignettes of three not-quite-average families: In one, a twin brother and sister separated only by geography (Indya Moore and Luka Sabbat) connect in Paris to reminisce about their recently deceased parents, who raised them there. (They too need to go through the "stuff," a part of grieving that involves an often jarring kind of tactile reckoning.) In another,



Charlotte Rampling plays a chilly, wound-tight matriarch and successful novelist who welcomes her two daughters—pink-haired free spirit Vicky Krieps, and Cate Blanchett as the prim, dutiful, but seemingly less-favored child—to her tidy Dublin home for a once-a-year Sunday-afternoon tea. Though the girls call their mother “Mummy,” you can hardly imagine her changing a messy diaper or wiping a stray dribble of drool—yet you recognize that the halting decorum with which they communicate is its own kind of affection, a language worked out across decades.

But the funniest and sweetest of Jarmusch’s three stories is the one in which siblings Adam Driver and Mayim Bialik pay a rare visit to their father, whom they’ve always found mysterious. They’re not sure what he ever did for a living; they worry that now, as a senior citizen, he’s hanging by a slender financial thread. When they arrive at Dad’s remote shambles of a house, they make note of the scrubby yard and the beat-up truck parked there. But he greets them with crusty bonhomie—it doesn’t hurt that he’s played by the great singer-songwriter and actor Tom Waits.

He’s happy to see them; he gratefully accepts the basket of special treats (spaghetti sauce, a bottle of bourbon) his son has brought. The three of them sit through their visit rather awkwardly—Dad has nothing but tea to offer his kids, and they make a joke, one that recurs in the movie, of wondering aloud whether it’s bad luck to toast with it. Finally, the kids slink away, happy to be free of this weird glimpse into their aged father’s life. But Waits’ dad is a man with a secret—a harmless but hilarious one. Jarmusch is getting at something elusive here: we may think we’re the center of our parents’ world, but once we leave the nest, their lives become their own once again. Who knows what they’re really getting up to?

**YET THE MOST RADIANT** of these films is Joachim Trier’s *Sentimental Value* (opening on Nov. 7), in which a long-absent father, Stellan Skarsgard’s Gustav, an esteemed but aging filmmaker, returns to his family home in Oslo to reconnect with his two grown daughters, Renate Reinsve’s Nora, a neurotic but respected stage actress, and Inga Ibsdotter Lilleaas’ Agnes, a mother and historian. Nora and Agnes’ mother has just died—another instance in which all the cupboards and closets must be gone through, with the sisters left to decide who will take which glass vase or oft-used dish. Gustav, who left the family abruptly when his children were little, has returned not so much to mourn his estranged wife as to interest Nora in playing a movie role he’s written for her.

Nora meets with him in a café; he outlines his request almost plaintively. She listens with guarded indifference before rejecting him outright. Although Agnes, having married and borne a child of her own, appears to have been more successful in moving

past Gustav’s abandonment, Nora has never forgiven him. She has mostly hidden her suffering, in often damaging ways. Only Agnes, the younger of the two sisters, knows the extent of it.

Gustav finds a replacement actress, an American (she’s played, with winsome gravitas, by Elle Fanning), and moves forward with his project—but not really. This small family trio is temporarily frozen in place: Gustav can’t make peace with the daughter he’s hurt so gravely—worse yet, he can’t even make art about his desire to do so. Agnes, grounded and generous, plays the go-between, but even she finds that role wearying. And Nora simply spirals. Gustav’s reappearance has forced a reckoning she’s not ready for. Reinsve, the star of Trier’s 2021 breakthrough hit *The Worst Person in the World*, shines here: she’s a firecracker that has lost its pop, left only to sputter and smoke. But Lilleaas, as Agnes, is the movie’s stealth weapon, a performer so serenely poetic that you might find yourself leaning toward the screen to catch every nuance. In a late scene, she comes to the rescue as Nora finds herself in crisis, only to remind her sister that any strength she has is thanks to Nora’s care and affection all through their childhood. When parents drop the ball, siblings often have a way of taking care of one another, carving a path into the future together.

“Tenderness is the new punk,” Trier said in May when he premiered *Sentimental Value* at the Cannes Film Festival, coining what could become the signature phrase of 2025. “I need to believe that we can see the other,” he continued, “that there is a sense of reconciliation. Polarization, anger, and machismo aren’t the way forward.” *Sentimental Value* is a drama about one family, but it could also be a message in a bottle for the greater world. Larkin, a proto-punk, poked fun at the way humans, just by procreating, pass their worst traits to their children and beyond, through infinity. Trier has much more hope, and his tender punk manifesto echoes something the English clergyman and historian Thomas Fuller said more than three centuries ago: Charity begins at home, but it shouldn’t end there. □

## ‘Tenderness is the new punk.’

JOACHIM TRIER, DIRECTOR OF *SENTIMENTAL VALUE*, AT THE CANNES FILM FESTIVAL IN MAY



REVIEW

## A New Wave origin story, and an act of love

BY STEPHANIE ZACHAREK

SOME DAYS IT SEEMS WE LIVE IN A HORRID WORLD where most humans couldn't give a fig about art. How many people in that world are going to care about a 65-year-old black-and-white movie—one that, for anyone who doesn't speak French, requires the reading of subtitles?

Yet here comes Richard Linklater's sensational *Nouvelle Vague*, an agile, witty, elegant picture about the making of Jean-Luc Godard's cannon-shot of a debut, 1960's *À bout de souffle*, known to English speakers as *Breathless*. *Breathless* is a movie that possibly only film lovers and bona fide old people care about. What current-day filmmaker would choose it as a subject? Only someone who cares. *Nouvelle Vague* is the ultimate inside-baseball making-of movie. But even more than that, it's a picture that stands strong on the side of art, of history, of working to solve the puzzle of things that maybe at first you don't fully understand. It's both a shout of joy and a call to arms. It's all about the bold, muscular act of giving a damn.

**GODARD WAS JUST 29** when he made *Breathless*, in which Jean-Paul Belmondo's sexy, raffish Michel Poiccard steals a car, shoots a cop, and is ultimately betrayed by his American wannabe journalist girlfriend, Jean Seberg's gamine femme fatale Patricia Franchini. *Nouvelle Vague* tells the story of how the enigmatically charming yet sort-of-a-jerk Godard—played, marvelously, by Guillaume Marbeck—wheedled his way into making *Breathless*, shot in just 23 days, guerrilla-style, largely on the streets of Paris.

▲  
Gaga for  
Godard:  
Marbeck with  
Nouvelle  
Vague director  
Linklater

**Is there a  
difference  
between  
loving a  
movie and  
being in  
love with  
one?**

First, he must assemble a cast. He persuades his friend Belmondo (Aubry Dullin) to play Michel, making his pitch at the boxing gym where the amiable, loose-limbed actor is working out. Can he get Jean Seberg (Zoey Deutch), already a star, to play Patricia? She agrees only reluctantly and later, aggravated by Godard's idiosyncrasies, she'll threaten to quit. He hires a clever, good-natured cinematographer, the gentle giant Raoul Coutard (Matthieu Penchinat). There's a persnickety script girl, Suzon Faye (Pauline Belle), who tries to tell her boss Godard that for continuity's sake, he can't remove a cup from a table on the set. "Reality is not continuity!" he says, just one of the many bossy, spontaneous, maddeningly delightful pronouncements he makes as he and his friends—all under 30, most with no idea what they're doing—launch into the adventure of making a moving picture.

Deutch, with her ragamuffin-chic blond pixie cut, is a marvelous Seberg, capturing her real-life counterpart's dang-flat Midwestern-accented French. And as Belmondo, Dullin gives a performance of spectacular physicality, whether he's scrambling in his pocket for chicken feed to buy a small café meal or, his character having just been shot, staggering and stumbling down a Paris street in a half-tragic, half-funny promenade, with Godard and his camera crew trailing behind. Marbeck, peering through dark glasses, shaking his pipe as he spins out his sometimes puzzling aphorisms, captures the impish magnetism of the young Godard. You want to slug him; you also adore him.

*Nouvelle Vague* is film as invitation—the best kind. If you don't know *Breathless*—what are you waiting for? And if you do know it, *Nouvelle Vague* will make you see it anew. Is there a difference between loving a movie and being in love with one? Maybe the distinction is subtle. But when a movie makes you want to weep with joy, you know something is happening. There's no resisting the gangster of love.

After a limited release in theaters, *Nouvelle Vague* streams on Netflix Nov. 14

REVIEW

## Descending into madness, brilliantly

IN AN EARLY SCENE IN LYNNE Ramsay's brutal, beautiful *Die My Love*, we see Jennifer Lawrence crawling through a sunny, grassy field on all fours, low to the ground like a sultry panther, as we hear a baby crying somewhere nearby—it turns out he's been parked, safely, on a porch. We don't know what Lawrence's precise, feral belly crawl means—did I mention that she's clutching a kitchen knife?—except somewhere in our gut we *do* know. The animal thing that drives us to pair up, to have sex, to fall in love, is the precursor to the adored pink being crying on the porch, the living, wailing, needy thing you'd do anything for.

*Die My Love*, in theaters Nov. 7, is about something no one wants to talk about: not just postpartum depression, but full-on madness for which there's no cure, not even temporary relief. In the real world, it would be diagnosed as psychosis, but Ramsay's film, adapted from Ariana Harwicz's slender scalpel of a novel, isn't about symptoms, causes, or treatments. It's about pure feeling, highs and lows that ought to balance one another but somehow don't. This is also the most complex, unsettling, and bleakly funny performance Lawrence—a fine, persuasive, charming actor since the beginning—has given.

*Die My Love* follows a young couple, Grace (Lawrence) and Jackson (Robert Pattinson), as their relationship disintegrates, post-baby. Grace rails at her partner for everything he can't give her, even as he can't begin to fathom what she wants or needs. Grace is angry, but she hasn't turned against her baby—in fact, the exact opposite. She's attuned to his cries as if they were issuing from her own throat. But she breastfeeds him with a blank look in her eyes; he's draining her dry, though her emptiness isn't his fault, and she knows it.

Sometimes Grace is capable of

manic pleasure: we see her, alone in her lonely house with its ditzy floral wallpaper, dancing like a teenager to Toni Basil's "Mickey." But mostly she fills her days with a kind of rattling, desperate emptiness, and though both Jackson and his cluelessly sympathetic mother (played by Sissy Spacek) try to help, they just can't reach her.

**ALL OF THIS** must make *Die My Love* sound like torture, the sort of cinema of unpleasantness you'd do well to run a mile from. But Scottish filmmaker Ramsay, whose last film was 2017's striking *You Were Never Really Here*, never gives us the simple, predictable thing. *Die My Love* is a kind of black comedy, both jagged and graceful. It's gorgeous to look at, a warped back-to-the-land reverie, complete with wildflower-dotted fields and happily bizzing bees, that

also feels like a kind of cosmic hell. And it works because it invites us to walk with Grace rather than judge—or, God forbid—diagnose her.

Lawrence has had children herself, and her body shows it. She's no movie-star stick figure; she has a dreamy earthiness, like a Rembrandt nude. Her face is round and plaintive; she's vulnerable-looking, like a baby Ellen Barkin. And as Grace, she goes not just to the edge but beyond it. This is the kind of performance people call "fearless," for lack of a better word—I'm sure there is a better word, but who knows what it is? What Lawrence does here is so delicately textured, even within its bold expressiveness, that it leaves you scrambling for adjectives. It's the kind of performance you go to the movies for, one that connects so sympathetically with the idea of human suffering that it scares you a little. Yet weirdly, by the end, *Die My Love* makes you feel more exhilarated than drained. At its heart, it's classic *l'amour fou*, but for one not two—the ultimate expression of what it means to be dancing with yourself. —s.z.

**Lawrence goes not just to the edge but beyond it**



At the precipice: Lawrence in *Die My Love*

ESSAY

## A murder franchise finds its *Monsters*—and they're us

BY JUDY BERMAN

MIDWAY THROUGH *MONSTER: THE ED GEIN STORY*, the title character stares into the camera and warns: “You shouldn’t be watching this.” He’s talking to two strangers who’ve interrupted him in the bloody aftermath of a murder. But the closeup makes it clear that Gein, played with eerie gentleness by Charlie Hunnam, is also addressing his audience of Netflix viewers. Then he revs his chainsaw and chases the men. Of course, we keep watching. In the next scene, Gein offers the spectacle of a dead, nude woman, strung up like a carcass in a slaughterhouse.

This sequence could easily get lost amid the parade of violence, gore, warped sexuality, and heavy-handed social commentary that makes up this and every season of Ryan Murphy and Ian Brennan’s *Monster* anthology. Yet it encapsulates the creators’ attitude toward true-crime fans. Like the two previous installments, on Jeffrey Dahmer and the Menendez brothers, *Ed Gein* retells in lurid—and largely fantastical—detail the legend of a notorious killer, explaining what our obsession with and inevitable misunderstanding of each case says about society. In taking on Gein, America’s ur-serial killer and the inspiration for many disturbing works of art and crime, *Monster* indicts the audience that made it one of TV’s most popular shows.

Disdain for the viewer is in *Monster*’s DNA. Its first two seasons open with multiple episodes re-enacting the crimes with self-aware salaciousness. Then there’s a turn, when the human impact of the case comes to the fore, challenging our ostensibly uncritical fascination with murder schlock. *Dahmer* shifts focus to the queer men and people of color whose oppression enabled Jeff (Evan Peters) to prey on them. *Menendez* is practically *American Psycho* for three episodes; preppies Lyle (Nicholas Alexander Chavez) and Erik (Cooper Koch) go on a shopping spree after executing their parents (Javier Bardem and Chloë Sevigny). Then come the boys’ harrowing accounts of sexual abuse at home.

*Ed Gein* works differently. Filtered through the perspective of Gein, a farmer with schizophrenia in 1940s Wisconsin, the season drifts between places and periods, actual crimes and sick fantasies. Gein is torn between perverse instincts and devotion to an austere, religious mother, Augusta



^  
Ed Gein’s (Hunnam) sometime girlfriend Adeline Watkins (Son) isn’t so sweet

(Laurie Metcalf). After her death, he keeps her corpse in a rocking chair and robs graves to fuel his “hobby” of crafting with human flesh. To the two murders Gein is known to have committed, *Monster* adds many others, though we can never be sure what’s real and what is in his mind.

**A TRADITIONAL INTERPRETATION** of Gein’s unraveling is that isolation, psychosis, grief, and a fixation on Nazi atrocities combined to make him the, yes, monster he became. *Monster* adds a catalyst in Adeline Watkins (Suzanna Son), fictionalizing the real woman as a soulmate who encourages his violence. Sexy, ambitious, and deprived, she is Mother’s worst nightmare. Just about everything unspeakable Gein does can, in this telling, be traced back to her. She shows him concentration-camp photos and comics about the sadistic Ilse Koch (Vicky Krieps), a.k.a. the Bitch of Buchenwald, who inspires him to make lampshades out of human skin. It’s Adeline who goads him to try necrophilia.

“Nothing human can disgust me,” she says. “If a human can do it, it’s fascinating.” This identifies her as an audience surrogate—the archetypal

**Disdain for the viewer is in *Monster*’s DNA**

true-crime fangirl. She gets vicarious pleasure from real people's pain but has empathy for neither the victims nor the tortured villain.

Adeline anticipates the hordes we see flocking to Gein once he's famous—the gawkers who tour his home; the patrons of William Castle's "sex horror" flicks; serial killers of the '70s and '80s. She is a point of comparison, too, for artists influenced by Gein, whose story blurs with iconic images from movies based on him: *Psycho*, *The Texas Chain Saw Massacre*, *The Silence of the Lambs*. But the filmmakers' motivations are framed as noble. "I wish to change cinema to reflect how we are, not how we wish we were," Alfred Hitchcock (Tom Hollander) declares. *Chain Saw* director Tobe Hooper (Will Brill) uses the Gein-esque Leatherface as a commentary on the Vietnam War.

*Ed Gein* isn't wrong to note that great art has arisen from engagement with true crime. But its insistence that people who consume this stuff are the real monsters, more than the storytellers who profit off their ravenous appetites, is convenient for Brennan and Murphy. *Monster* has, itself, faced criticism from the Menendezes and the families of Dahmer's victims, who feel their traumas were sensationalized. It's possible the creators identify more with Castle than Hitchcock. If so, *Ed Gein* is a show that hates itself.

Still, it's not the sleaze peddler or even the murderer who ends up looking the worst. Portrayed as an unholy fool, free of malice and harmless once medicated, Gein redeems himself by helping the FBI capture Ted Bundy—a flourish with no basis in fact. In death, he reunites with his mother. "You really made a name for us Geins," she gushes. "I couldn't be more proud."

We last see Adeline in the finale, when she visits Gein after decades of estrangement. She explains that she has what sounds like bipolar disorder but chooses to go unmedicated, embracing her darkness. And she's brought a list of "people I've gotta get rid of." It repulses Gein. For *Monster*, a person who takes lives and desecrates corpses is capable of redemption. A fan of *Monster*, though? No such luck. □

#### REVIEW

## *Slow Horses* gets an explosive sister show

In the premiere of *Down Cemetery Road*, a desperate woman walks into a private investigator's office. "Let me guess," says the detective, Zoë Boehm (Emma Thompson). "You've got a husband. He's got a secretary. Am I warm?" She is not. Neither a film-noir femme fatale nor a jealous housewife, Sarah Trafford (Ruth Wilson) has come for help in solving a mystery that has little to do with her own life. Her initially inexplicable obsession sets the tone for Apple's unusually humane conspiracy thriller.

Sarah is bombing as the host of a dinner party when a literal explosive goes off in her neighborhood. A little girl, Dinah, is carried out of the wreckage—the sole survivor of a blast that killed her mom. But when Sarah goes to the hospital to drop off a card for Dinah, she's turned away by weirdly hostile staffers. The child is conspicuously absent from news coverage of the explosion.

The more time we spend with Sarah, a protagonist endowed by Wilson with a compelling mix of brilliance, righteousness, repression, and neurosis, the more we believe that she's the kind of person who'd put her comfortable, middle-class

life on the line to rescue a 5-year-old stranger. Tough and sardonic, with a touch of dissipated glamour and a strained relationship to her sweet, nerdy husband and business partner, Joe (Adam Godley), Zoë is skeptical of Sarah at first. But she soon has reason to join the search for Dinah. Some of the villains they encounter, in what turns out to be far more sinister than a missing-persons case, are fascinatingly conflicted; others read as manifestations of pure evil.

The least convincing aspect of the show is the conspiracy itself, which seems oversimplified. Yet the characters are so richly drawn and the plot twists—at least one bombshell per episode—so captivating, it's hard to blame writer Morwenna Banks for emphasizing those elements instead. Banks has also written for *Slow Horses*, an acclaimed Apple spy thriller that, like *Down Cemetery Road*, is based on a series of novels by Mick Herron. The shows share a preoccupation with the heroic potential of oddballs and burnouts, one that has kept *Horses* galloping for five seasons. Here's hoping that this cast of outsiders has just as many adventures ahead of it. —J.B.



Thompson lends an icy glamour to the heroine of Mick Herron's Zoë Boehm novels

## Padma Lakshmi The culinary television star on centering immigrant stories, taking inspiration from activism, and writing her latest cookbook

***Taste the Nation*, your Hulu docu-series highlighting the cuisines of immigrant and Indigenous communities in the U.S., was inspired, in part, by your history of advocacy work. Are you surprised by how topical the show is five years after it premiered?** It's saddening to me. When young people ask me, "How do I get involved? What do I do? I don't know where to start," I always say, pick one issue that you have a personal connection to, because that way you can speak to it from a deeper level. I started doing *Taste the Nation* because I wanted to bridge my advocacy and my creative work as a TV professional. I felt this was a positive way of saying, "Why don't we just get together and eat? Why don't you walk across the street and get to know your neighbor?"

**Your new cookbook, *Padma's All American: Tales, Travels, and Recipes from Taste the Nation and Beyond*, comes out on Nov. 4. How are you feeling?** I'm excited for it to finally be out in the world, but I'm also a little nervous because while I know that this food is definitely thriving in many communities, it's also food that a lot of Americans may not be familiar with because they haven't ventured into those immigrant enclaves. There's not a lot of technique involved in many of these recipes, but they may have some ingredients that Americans may feel a little intimidated by.

**What would you say to people who feel that way?** Make it an activity of discovery for you and your family. On a Saturday or Sunday, go out to a neighborhood you are not familiar with. Go to a Latin market, go to an Asian market, and then make a dish at home with a buddy for the first time. I want to broaden people's culinary horizons, and I think one way

**You often speak about food through the lens of family. Why is that important to you?**

Because you can't cook for people you don't care about. You can't cook for people you don't see as human. I don't believe your food will be good. Cooking for another person—family, a friend, or a colleague—is such a simple, basic act of nurturing.



to do that is to discover all the glorious food that exists right in our country, brought here by generations of immigrants.

**There are photos and stories of your daughter, Krishna, peppered throughout the book. What does it mean to you to be able to share your love of food with her?** The truth is many nights I'm busy working. My nanny will cook something beautiful, and then [Krishna] will come down and be like, "Oh, I just ordered Taco Bell." She's a normal American teenager. But it was very moving, when we were selecting the photographs for this book, to see how much she's grown. Having a child makes you aware of time in a way that I certainly was never aware of before being a mother.

**Also included are profiles of people first featured on *Taste the Nation*: among them, a Gullah Geechee chef in South Carolina, a Peruvian dance teacher in New Jersey, and an Iranian restaurant owner in Los Angeles. What drew you to their stories?** I wanted to give a good cross section of the people that I met on the road. When you travel this country by road and you embed yourself—which is not always easy to do; I had the privilege of doing that with a TV show—you learn so much more. Not only about that community, but about our country.

**Your new cooking competition show, *America's Culinary Cup*, premieres on CBS on March 4. What are you excited for viewers to see?** I'm really excited for people to find out about the challenges, and also see what world-class chefs we have [competing]. Giving away a million dollars brings a lot of people out of the woodwork. —ERIN MCMULLEN

# SKECHERS® AERO BURST™

COMFORT THAT PERFORMS®



MEN'S

CUT THROUGH THE WIND IN SKECHERS AERO BURST



WOMEN'S



SKECHERS  
SLIP-INS

SKECHERS  
ARCHFIT  
Podiatrist Certified Arch Support

CARBON  
INFUSED  
PLATE

GOODYEAR  
PERFORMANCE OUTSOLES

SKECHERS.COM

Goodyear (and Winged Foot Design) are trademarks of or licensed to The Goodyear Tire & Rubber Company used under license by Skechers USA, Inc., Manhattan Beach, CA. © 2025 The Goodyear Tire & Rubber Company. This or any footwear cannot completely eliminate the risk of slipping.

# TIME COVER STORE



ENJOY TIME AT HOME  
SHOP SOME OF TIME'S MOST ICONIC COVER ART

[TIMECOVERSTORE.COM](https://timecoverstore.com)

