

EXPLAINER: Bikes, batteries and blazes spark concern in NYC

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A man making deliveries rides an electronic bike in New York, Dec. 21, 2017. A weekend fire that injured over three dozen people and forced firefighters to use ropes to pluck people from a 20th-story window is drawing attention to a rising concern in New York City: battery fires that can arise in the electric bikes and scooters that have proliferated here. Credit: AP Photo/Seth Wenig, File

A weekend fire that injured over three dozen people—and forced firefighters to use ropes to pluck people from a 20th-story window—is drawing attention to a rising concern in New York City: battery fires that can arise in the electric bikes and scooters that have proliferated here.

City officials are considering [new laws](#) after the [fire](#) department counted nearly 200 blazes and six fire deaths this year tied to problems with lithium-ion batteries in such "micromobility" devices.

WHAT ARE THESE BATTERIES? ARE THEY THE SAME TECH USED IN PHONES AND CARS?

Lithium-ion batteries are a Nobel Prize-winning innovation that entered the market in the early 1990s. Hailed as rechargeable, lightweight, powerful, durable and safe, the batteries have been envisioned as a key to greening the world's [energy supply](#) by storing energy, including from the sun, wind and other [renewable sources](#).

The technology has woven its way into many people's [everyday lives](#), powering phones, [laptop computers](#), vehicles and more.

WHY CAN THEY CATCH FIRE?

The batteries' electrolyte—a solution that lets electrical current flow—is flammable, explains Massachusetts Institute of Technology materials chemistry professor Dr. Donald Sadoway. The substance was chosen for its ability to handle the voltage involved, but fires can happen if the batteries are overcharged, overheated, defective or damaged, for instance.

Over the years, problems have periodically triggered fires involving laptops, cellphones, hoverboards, electric vehicles, airplanes and battery power storage installations. A U.N. aviation agency said in 2016 that

lithium-ion batteries shouldn't be shipped on passenger planes.

Battery industry group leader James Greenberger notes that other energy sources aren't trouble-free, and he says there's nothing inherently unsafe about the batteries. But he said the industry is concerned about the fires lately in New York and worries that they could scare off consumers.

"This shouldn't be happening and we need to figure out what's going on," said Greenberger, the executive director of NAATBatt—the North American trade association for advanced battery technology developers, manufacturers and users.

WHY ARE E-BIKES AND SCOOTERS GETTING SCRUTINY IN NEW YORK?

The city has seen "an exponential increase" in fires related to faulty lithium-ion batteries in recent years, Chief Fire Marshal Daniel Flynn said. He said there have been more deaths and injuries already this year than in the past three years combined.

"It's a big issue," he said at a news conference Monday, describing fires that occur without warning, grow rapidly and are tough to extinguish.

The batteries "fail almost in an explosive way—it's like a blowtorch," he said.

Saturday's fire in a Manhattan apartment was sparked by a malfunctioning e-bike battery that residents were attempting to charge and left unattended while they fell asleep, he said. They were trapped when the battery, plugged in by the front door, caught fire, Flynn said.

Electric bikes and scooters have become popular, non-gasoline-burning ways to make deliveries, commute and zip around a city that has

promoted cycling in recent decades. For the "deliveristas" who carry restaurant takeout orders, the bikes are crucial tools of the trade.

"What these workers have learned over the years, and they know it well, is that, like any equipment, it requires the maintenance required," said Hildalyn Colón Hernández, a spokesperson for worker advocacy group Los Deliveristas Unidos. She said many workers have used their batteries for years without a hitch.

WHAT'S CAUSING THE PROBLEM?

There are different opinions. Greenberger, the industry group director, suggests there's too little quality control on some of the largely imported batteries. Sadoway, the scientist, believes "we don't have the appropriate protective measures" on e-bikes and scooters themselves to monitor the batteries for problems.

Colón Hernández, the delivery worker advocate, thinks there need to be tougher standards around the batteries, such as regulations for businesses that sell or service them.

WHAT IS NEW YORK CITY DOING ABOUT THIS?

The Fire Department has repeatedly issued warnings and [safety tips](#) over the past year. Fire Commissioner Laura Kavanaugh asked the federal Consumer Product Safety Commission in August to consider new regulations. Mayor Eric Adams pointed again to the CPSC on Monday.

"The responsibility of navigating safe and unsafe batteries on the market should not fall to hard-working New Yorkers," the mayor, a Democrat, said in a statement.

Some city lawmakers want to take their own steps.

A City Council committee has set a Nov. 14 hearing on various proposals. Some would require public education campaigns or safety reports. Another would prohibit the sale of some secondhand [lithium-ion batteries](#), or e-bike or scooter batteries without certain seals of approval.

Meanwhile, fire officials continue to urge everyone not to leave batteries to charge unattended, to check that they're not damaged or near a [heat source](#), and to make sure the batteries, chargers, cords and devices are all from the same manufacturer and used as instructed.

"We understand the benefits that these batteries pose to our communities, and we want to encourage use of them, but [safe use](#)," Flynn said. "So understand that it does pose a danger, and just use them safely."

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