Meet Bloom Energy

A better way to power critical infrastructure

Bloom energy

What's inside

Your questions, answered

Your neighborhood is on the cusp of change, and Bloom Energy is a part of that story. The infrastructure your community is considering will be powered by Bloom fuel cells.

Large development projects bring real questions about what it means to live nearby.

What is a fuel cell?

Will it affect air quality?

How does it use water?

Can it impact local electricity costs?

Who has verified that it's safe, and how?

How much space does it take up?

These are the right questions to ask. They're the same questions that guided how we designed our fuel cell technology in the first place — with safety, sustainability, and community in mind. And they're the questions this document addresses directly, so that you can move forward with answers and assurance.

A message from our CEO

Dear Neighbors,

As Bloom Energy marks its 25th anniversary, we remain true to the mission that has guided us since our founding: to make electricity abundant for all. From the beginning, we have believed that clean, reliable, and affordable onsite power matters.

Operating in communities like yours is both a privilege and a responsibility. Our goal has always been to be a good neighbor. Every decision we make — from how we design our systems to how we operate and maintain them — is guided by a simple question: are we comfortable installing this next to the places people live, work, and raise their families? The answer has always had to be yes.

Our fuel cells are:

Clean

Low water

Quiet

Designed for the environment

We take pride in the performance of our systems and the relationships we build within the communities we serve. When we become part of a neighborhood, we arrive with care and a commitment to staying for the long term.

Thank you for welcoming us.

KR Sridhar
Founder and CEO, Bloom Energy

Our commitment to you

Bloom Energy has been operating in communities around the world for nearly two decades. In that time, we have learned that being a good neighbor means more than building safe, clean technology. It also means showing up, staying transparent, and being accountable to the people who live nearby.

We are committed to delivering clean power, with fewer emissions and significantly less water use than conventional alternatives.

We are committed to operating safely, with systems and oversight designed to protect the people around every installation.

We are committed to making our technology cleaner over time, continuously reducing its impact on the world around it.

We are committed to transparency, publishing annual impact reports and engaging openly with the communities where we work.

We’re committed to being a good neighbor.

We welcome your questions.

Bloom Energy

Before we answer your questions about what's being built, you should know who's building it.

Bloom Energy's roots go back to NASA's Mars program, where the underlying fuel cell technology was originally developed to sustain human life in space.

In 2001, our founders brought that same technology to Earth with one mission: **to make clean, reliable energy affordable for everyone in the world.**

Since then, Bloom fuel cells have been generating electricity — quietly, cleanly, and without incident — at hospitals, university campuses, retail stores, manufacturing facilities, and the communities around them.

Bloom in operation

25 years

Fuel cells in operation

18 years

Global footprint

9 countries

Total deployments

1,000+

What we build: fuel cells

Fuel cell basics

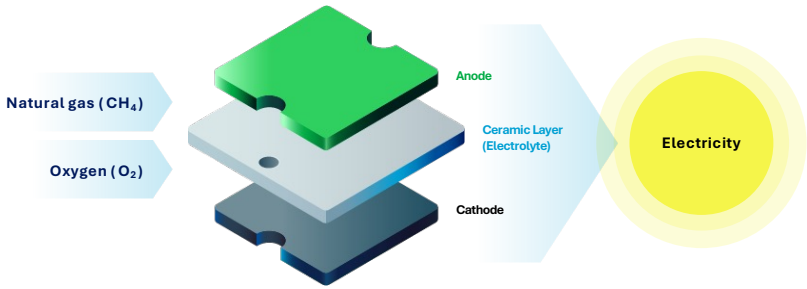
Most legacy electricity sources — coal plants, gas turbines, diesel generators — work by burning fuel to create heat. That combustion process produces exhaust, noise, and air pollutants.

Fuel cells don't. They convert fuel like natural gas into electricity directly through a controlled electrochemical reaction. **The result is cleaner air, quieter operation, and significantly less water use than conventional power generation.**

What's really happening?

On the fuel cell, air enters one side and natural gas enters the other, separated by a ceramic layer. Oxygen from the air passes through the ceramic and combines with the fuel. That reaction produces electricity, a small amount of water vapor, and heat. The water gets recycled back into the process.

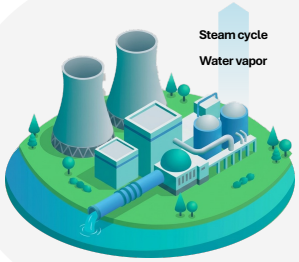
As long as fuel and air are supplied, the system keeps generating power — continuously, without combustion, and without the noise or exhaust that comes with burning fuel.



Preserving your water

Combustion-based power generation can be water intensive. Bloom fuel cells are not.

A small amount of water is required for one-time use at startup. After that, the system is designed to run without additional water under normal operation. Periodically, the systems are serviced and require water to restart. Water required for maintenance is estimated to average 780 gallons per year, for every 10 megawatts of power — equivalent to 2 days of an average American household's use.



Traditional power generation

- ✕ Water is used to regulate heat in the system
- ✕ Used to reduce air pollution

Bloom Energy fuel cells

- \+ No water during normal operation
- \+ No liquid discharged into the ground

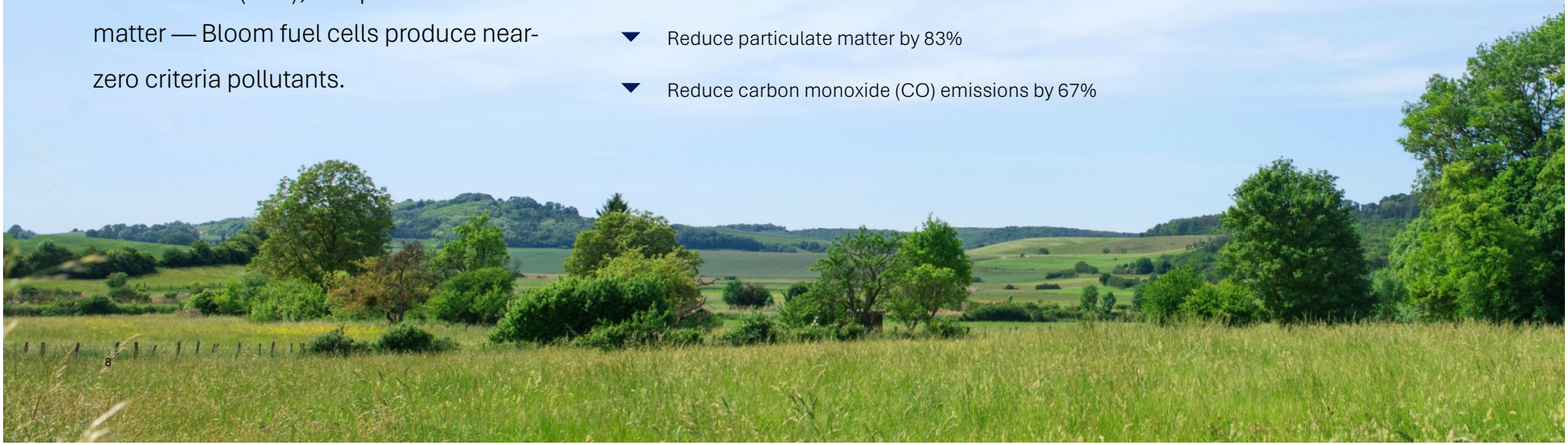
Source: Bloom Energy Impact Report, 2025

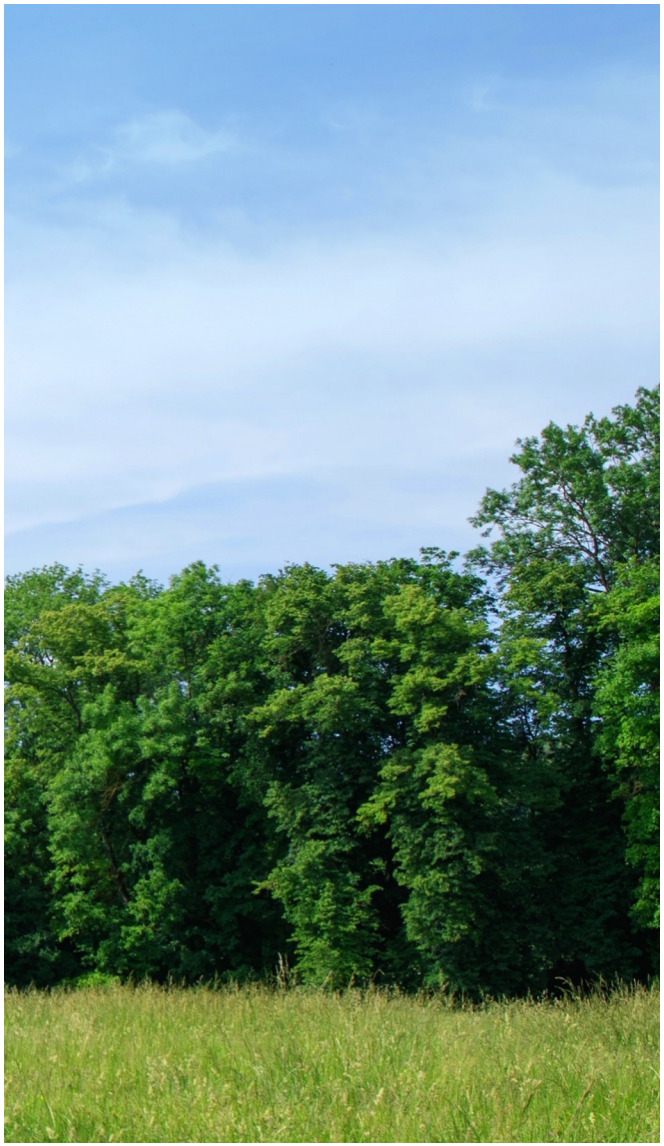
Preserving your air

Unlike combustion-based generation technology — which produces air pollutants like nitrogen oxides (NOx), sulfur oxides (SOx), and particulate matter — Bloom fuel cells produce near-zero criteria pollutants.

For example, a new large data center, now supported by Bloom technology, is expected to:

- Reduce NOx emissions by 92%
- Reduce SOx emissions by 99%
- Reduce particulate matter by 83%
- Reduce carbon monoxide (CO) emissions by 67%





Bloom's fuel cells operate at high efficiency, using less fuel per unit of energy produced, creating fewer carbon emissions in the process. Compared to turbines and engines, our fuel cells can produce **20 – 30%** less CO_2.

They are also built to support additional decarbonization options. These include the use of waste heat to support building operations, hydrogen fuel flexibility and the capture and sequestration or utilization of our high purity exhaust.

Our flexible technology and diverse solution set is designed to support the transition to a clean energy future and help achieve your region's clean energy goals.

20 – 30% less

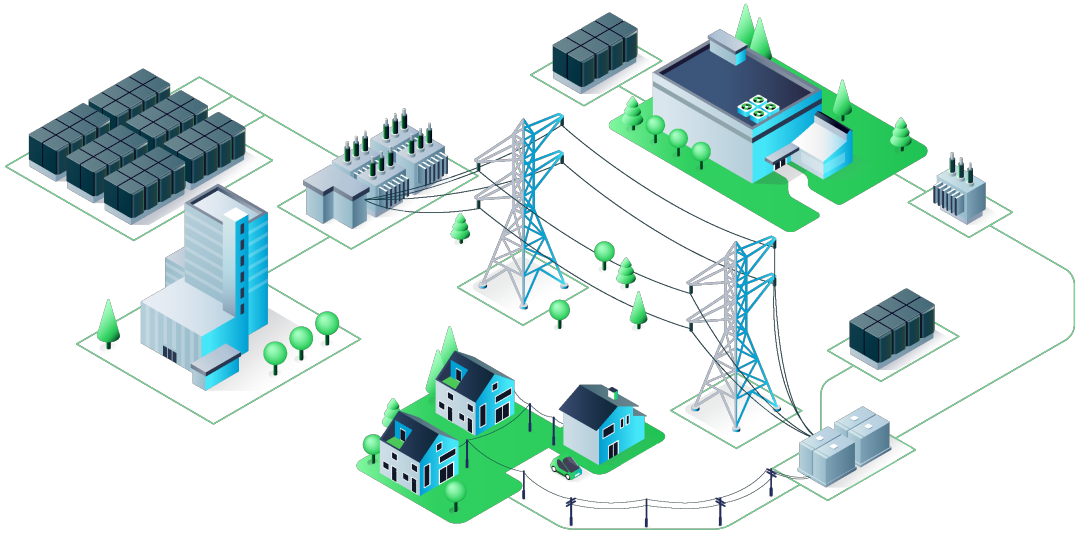
Carbon emissions than combustion power generation

Preserving your grid

Most large buildings and facilities draw their electricity from the same local grid your home uses. When demand spikes — or when a large new facility comes online — that added strain can push utility costs up for everyone in the area.

Bloom works differently. We can generate power on-site, at the facility itself. Onsite power means the installation can run independently, generating its own electricity rather than pulling from the grid that residences and local businesses rely on.

Your electricity supply and your utility bills are unaffected.
It also means the installation keeps running even when the broader grid goes down.



Bloom can go a step further — connecting to the local grid, not to draw from it, but to feed excess power back in. This adds supply to the grid when the community needs it most, helping keep it stable for everyone.

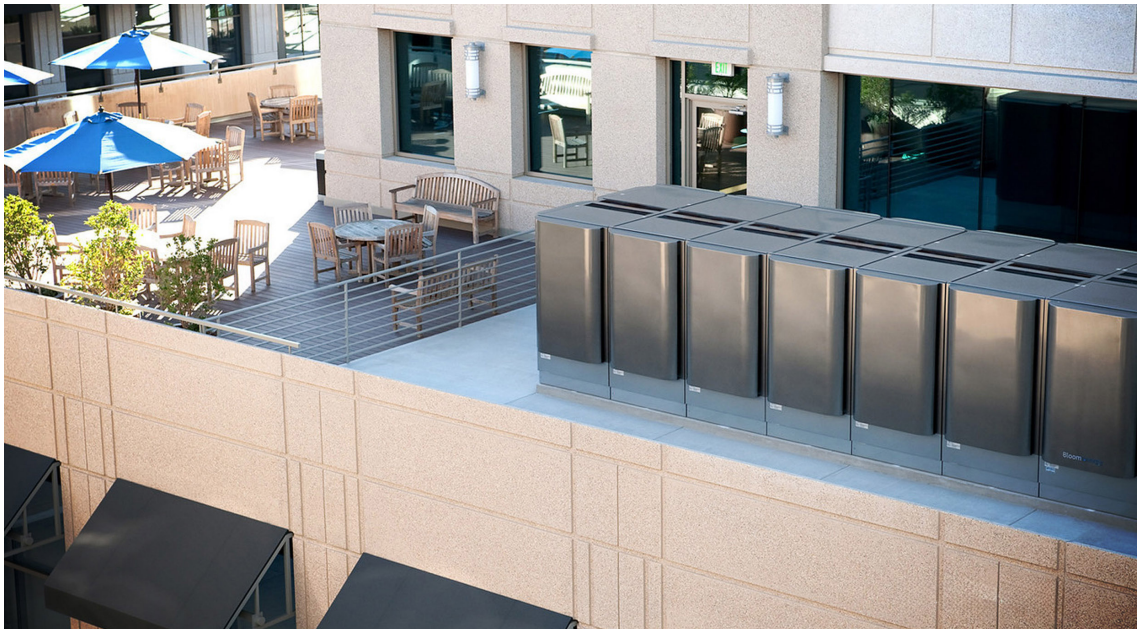
Preserving your neighborhood

Bloom is designed to be a good neighbor.

At 65 decibels, our fuel cells operate at roughly the volume of a commercial air conditioner. With no combustion, there is no rumble, no roar, and no smell.

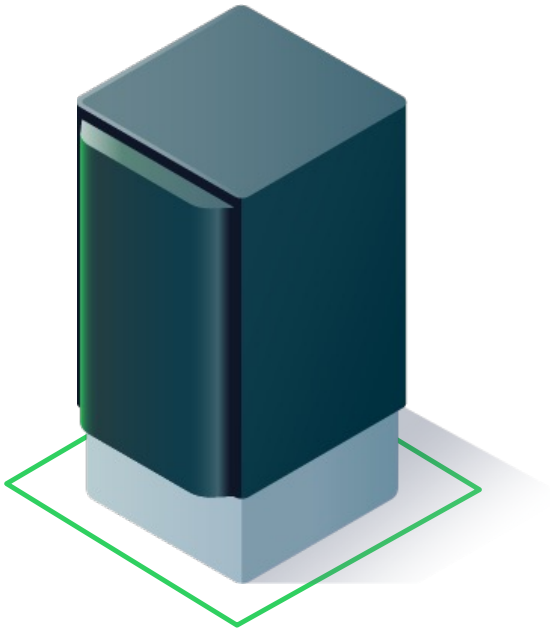
The units themselves are compact and typically require no transmission lines or substations. Because fuel cells generate significantly more power per square foot than wind or solar installations, they can meet large energy needs without large land requirements.

The result is an installation designed to fit seamlessly into your community environment.



Engineered with safeguards

Fuel cells are engineered to prevent, detect, and mitigate risks through built-in safeguards.



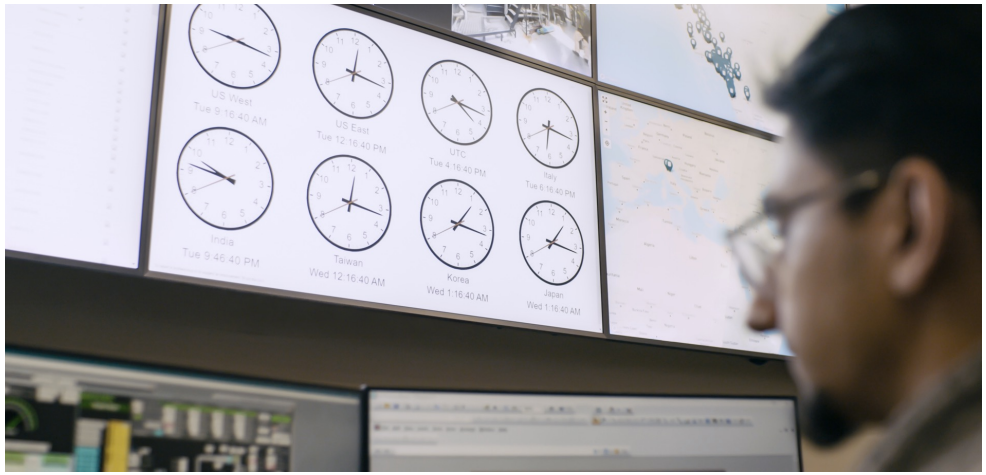
Bloom systems connect directly to natural gas distribution lines — the same infrastructure that serves standard commercial buildings.

With built-in, always-on leak detection, the system identifies irregularities automatically. If the unit detects a problem, a natural gas shut-off valve and instant disconnect feature cuts the supply immediately.

With no combustion and no stored gas inside the system, fuel cells are designed to reduce the risk of fire or explosion.

Operated with continuous oversight

Beyond the physical safeguards built into every unit, three independent layers of digital and human oversight run continuously — each kept separate so that no single problem can affect the whole system.



Safety control

Every Bloom unit has a dedicated safety controller — an independent computer whose job is to watch for problems and shut the unit down on the rare occasion it finds one.

System control

A separate digital layer manages day-to-day operations. It is kept deliberately separate from the safety controller, so a problem with one cannot affect the other.

Remote Monitoring Control Center

A specialized Bloom team watches every installation 24 hours a day, seven days a week, 365 days a year. If anything unusual occurs, they can act immediately anywhere in the country.

Connected with local first responders

Bloom's standard practice is to engage local fire officials and safety authorities early in the process, so the people responsible for your community's safety understand exactly what is being installed and how it works before it is on the ground and operational.

Every Bloom installation goes through a formal permitting process that requires engagement with local governing agencies, and the projects must be constructed, operated, and maintained in accordance with approved plans.

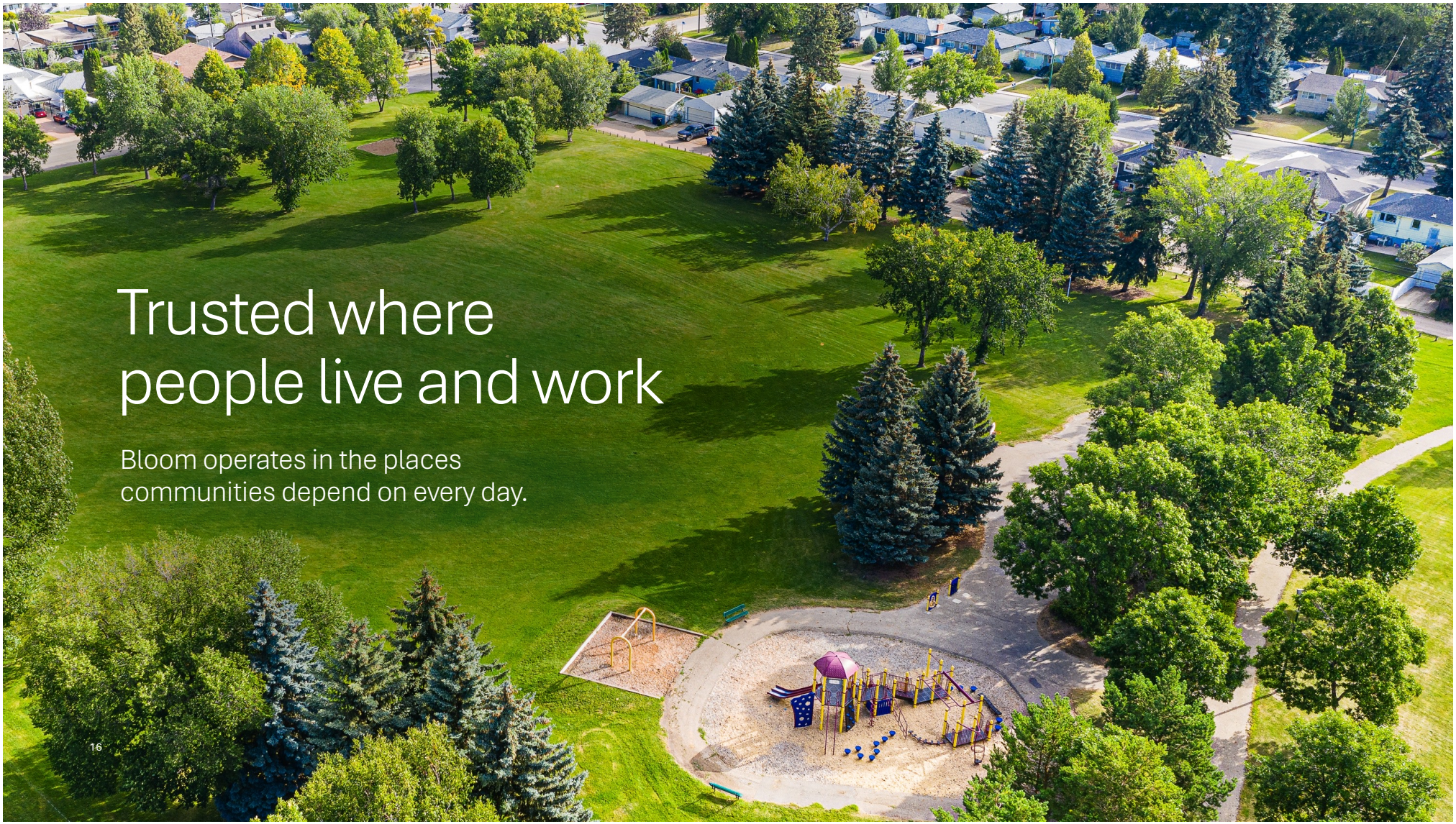
It is a commitment we take seriously at every site.

Independently verified

When a new energy installation comes to your community, the case for safety shouldn't just come from the company responsible for it.

Bloom works with a third-party organization called **UL Solutions** — the same group behind the safety mark on your refrigerator, your power tools, and your hairdryer — to obtain science-backed certification of our technology.

That means every component within every system has been evaluated by an independent organization that has over 130 years of experience setting the safety standard for the products you use every day.



Trusted where people live and work

Bloom operates in the places communities depend on every day.

Proven in communities

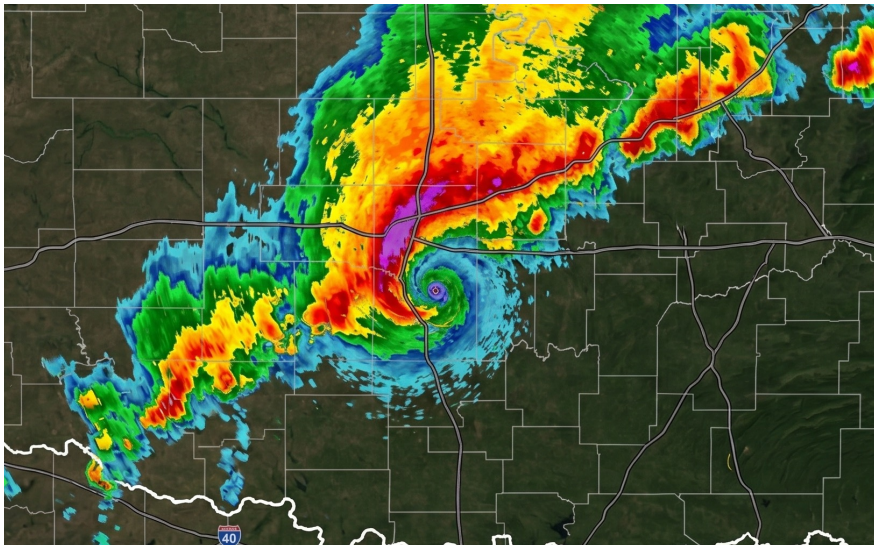
At Stamford Hospital in Connecticut, we provide stable, continuous electricity for patient care — quietly and without adding to local air pollution.

At more than 40 Walmart locations across the country, we keep the lights on and the shelves stocked around the clock.

At the Crypto Arena in Los Angeles, one of the most visited arenas in the country, we power the experience while reducing the building's carbon footprint.

At Caltech in Pasadena, California, we have been running continuously since 2009 — powering education for over 15 years, without interruption or incident.

Trusted when you need it most



Bloom fuel cells are built to deliver power in demanding conditions.

In the last five years alone, Bloom has powered facilities through more than 1,700 outages. Our technology is resilient enough to endure storms, wildfires, and earthquakes.

During Hurricane Sandy, we powered a retail facility through the storm — allowing community members to secure essentials — while widespread outages knocked out power across the region.

After severe storms in Hartford, Connecticut, left 750,000 people without power for nearly 2 weeks, the city partnered with Bloom to make sure it never faced that situation again.

Today in Hartford, Bloom powers a local elementary school, library, senior center, gas station, grocery store, and health clinic. When the grid goes down, those buildings stay on, giving residents peace of mind.

Trusted by the industry

Bloom has been recognized for operating transparently and responsibly in communities around the country.

In 2026, Newsweek ranked Bloom as **America's Second Most Trustworthy Company in the Energy and Utilities** category. The ranking was determined by an independent survey of 25,000 U.S. respondents, reflecting the perspectives of consumers, employees, and investors.

TIME magazine named Bloom one of **America's Top GreenTech Companies,** recognized for positive environmental impact, innovation, and financial strength.

Recognition like this reflects what happens when a company does the same thing, the right way, for a long time.

"Trust is built over time — and at Bloom, we've spent 25 years earning it."

KR Sridhar,
Founder and CEO, Bloom Energy

Made in America

Every Bloom fuel cell is designed and manufactured in the United States at facilities in Newark, Delaware and Fremont, California.

Our technology was invented here, and the people who build it live and work in American communities.

Across our facilities, Bloom has created hundreds of clean energy manufacturing jobs and continues to invest in the American workforce that builds this technology.

FAQ

What is a fuel cell?

A fuel cell generates electricity through an electrochemical reaction, without burning anything. Fuel enters one side, air enters the other, and the two react across a ceramic layer to produce electricity without combustion.

Will this affect the air quality in my neighborhood?

Unlike traditional combustion-based power generation technology — which produces air pollutants like nitrogen oxides (NOx), sulfur oxides (SOx), and particulate matter — Bloom fuel cells produce near-zero criteria pollutants.

Will this affect our water supply?

No. Bloom fuel cells use no water during normal operations. A small amount of water is required at startup, and then periodically the units are serviced and require some water to restart. No liquid is discharged into the ground.

Will my electricity bill go up?

Bloom fuel cells can generate power on-site at the facility itself whereby the installation does not need to draw from the local grid your home relies on, helping avoid impact on your utility bills.

How loud will it be?

Bloom fuel cells operate at 65 decibels — quieter than a commercial air conditioner. There is no combustion and no turbines, so there is no rumble or roar.

How much space will it take up?

Fuel cells are compact and require no transmission lines or substations. They generate significantly more power per square foot than wind or solar installations, so they can meet large energy needs without large land requirements.

Is it safe?

Yes. Bloom fuel cells are engineered with multiple layers of physical and digital safeguards — including continuous leak detection, automatic shutdown systems, and 24/7 remote monitoring.

Has this technology been proven in communities like mine?

Yes. Bloom fuel cells have been operating at hospitals, university campuses, retail stores, and neighborhoods across the United States for nearly two decades.

Who verifies Bloom's safety claims?

Bloom worked with UL Solutions to obtain third-party, science-backed certification for our fuel cells.

Bloom energy