

THE POWER BEHIND MODERN LIVING

Explore the technologies redefining home comfort, health, and everyday living



17 Mile Haus: Architecture by PassiveHouseBB, Construction by Carmel Building & Design, Photos by Treve Johnson Photography

PRESCRIBING A HEALTHY HOME WITH DR. LISA PATEL

> **"You're not choosing to expose your family to [pollution] the way you might choose a food or an activity; it's baked into the home itself, day after day, whether you're paying attention to it or not."**
>
> ***—Dr. Patel***



Lisa Patel, MD, MESc, FAAP

HOW ELECTRIC HOMES CREATE HEALTHIER SPACES TO LIVE, BREATHE, AND THRIVE IN

The spaces we live in shape our everyday experience. The warmth of a room, the comfort of a shower, and the air we breathe are all influenced by the systems working behind the walls of your home.

Appliances play an important role in having a healthier home. Water heaters and space heating equipment powered by gas are among the largest sources of emissions from building appliances, accounting for 90% of total emissions. In 2019, residential natural gas combustion in the Bay Area produced roughly the same amount of nitrogen oxide (NOx) emissions as passenger vehicles.[1]

As research continues to deepen our understanding of the relationship between combustion in the home and indoor and outdoor air quality, the conversation around healthy homes is becoming more important. While the Bay Area is a leader in innovation, health, and climate, there are more opportunities to bring these values into the places we live every day.

We sat down with Dr. Lisa Patel, Executive Director of the Medical Society Consortium on Climate and Health and a practicing pediatric hospitalist at Stanford, to understand how air quality actually impacts our health.

Her career bridges environmental science and medicine, including an EPA fellowship focused on clean air and water initiatives and national advocacy through the American Academy of Pediatrics. She is also a frequent media voice on climate, health, and equity, with expertise featured in The New York Times, CNN and other national outlets.

1 Bay Area Air District

Q&A

> **“And unlike many health risks that require ongoing behavior change, this is often a one-time decision, choosing an appliance, that then quietly protects your family for years afterward.”**
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> ***—Dr. Patel***

What makes a home healthy?

A healthy home starts with good indoor air that is free of combustion pollutants, mold, and excess humidity. It’s also about the materials and systems working together: proper ventilation, appliances that don’t burn fuel indoors, and a stable, comfortable temperature without relying on systems that compromise air quality to achieve it. Increasingly, I’d add: a home resilient to the climate conditions we’re now facing regularly, including extreme heat and wildfire smoke days, since a “healthy home” today has to hold up under conditions that didn’t used to be the norm. Cool rooftops, more greenery, and a properly weatherized home.

How do you see air quality impacting your patients today?

I see it constantly in my work as a pediatric hospitalist: children, usually under the age of 5, showing up in our emergency rooms with their lungs so filled with inflammation they feel like they can’t breathe. Poor air quality, whether outdoor pollution or pollutants generated inside the home, is a major driver of childhood asthma, one of the most common reasons children end up in the hospital. And the effects aren’t limited to asthma. Air pollution is linked to impaired lung development in children, cardiovascular disease, and even cognitive effects. Indoor air quality matters just as much as outdoor, because we spend roughly 90% of our time indoors, and for young children, much of that time is often at home.

What impacts do gas appliances have on my indoor air quality?

Gas appliances such as stoves, water heaters, and furnaces burn fuel indoors, and that combustion releases pollutants including nitrogen dioxide (NO2), carbon monoxide, formaldehyde, and fine particulate matter, even when the appliance is working exactly as designed. Gas stoves in particular are a well-documented source of elevated indoor NO2, and research has linked homes with gas stoves to higher rates of childhood asthma. These pollutants build up especially in smaller or less-ventilated kitchens, which is often where families, including young children, spend a lot of time. One study[2] has attributed 13% of pediatric asthma cases to gas stoves. There is so much in childhood asthma that we can’t modify, but gas stoves are a place where we can take action.

How does this concern compare to all of the other health concerns and decisions that we are faced with every day?

We often take our air quality for granted because this country did a lot to clean it up. But now we’re backsliding both because of policy decisions that are resulting in us burning more fossil fuels, and because of worsening wildfire smoke that is erasing our clean air quality gains. I understand air quality can feel like one more thing on an already long list of health decisions parents face. But what makes it different is that it’s often invisible, continuous, and study after study shows that air pollution is bad for our brains, lungs, and hearts. You’re not choosing to expose your family to it the way you might choose a food or an activity; it’s baked into the home itself, day after day, whether you’re paying attention to it or not. And unlike many health risks that require ongoing behavior change, this is often a one-time decision, choosing an appliance, that then quietly protects your family for years afterward.

2 Nitrogen dioxide exposure, health outcomes, and associated demographic disparities due to gas and propane combustion by U.S. stoves. Sci. Adv. 10, eadm8680 (2024).



BUILDING A HEALTHIER BAY AREA

RECOGNIZING REGIONAL PLAYERS THAT ARE HELPING BUILD A CLEAN TOMORROW

You heard the doctor's orders: A healthy home is an electric home. Skip the side of pollution with dinner from the gas stove, pause the pump of NO2 into your neighborhood, and breathe easier. That's a cleaner, safer future that everyone deserves. Achieving that goal will require collaboration across the region and across industries.

Thankfully, in true Silicon Valley spirit, there is no shortage of climate champions, technical leaders, innovators and passionate community members. Silicon Valley Clean Energy recognizes two organizations helping to make this goal a reality.

BRONWYN BARRY

Bronwyn Barry is an award-winning architect and principal at Passive House BB. Her San Francisco-based company exclusively designs all-electric homes that meet or exceed Passive House standards. Her firm prioritizes full building decarbonization and includes extensive advocacy to remove barriers for building better. Bronwyn is a co-founder of Passive House California (PHCA) and the Passive House Network (PHN), where she serves as Policy Director.

"My clients routinely praise the great indoor air quality delivered by their heat recovery ventilator. Those new to induction love the precision and easy-to-clean features of these electric cooktops."

passivehousebb.com



Photo courtesy of Bronwyn Barry



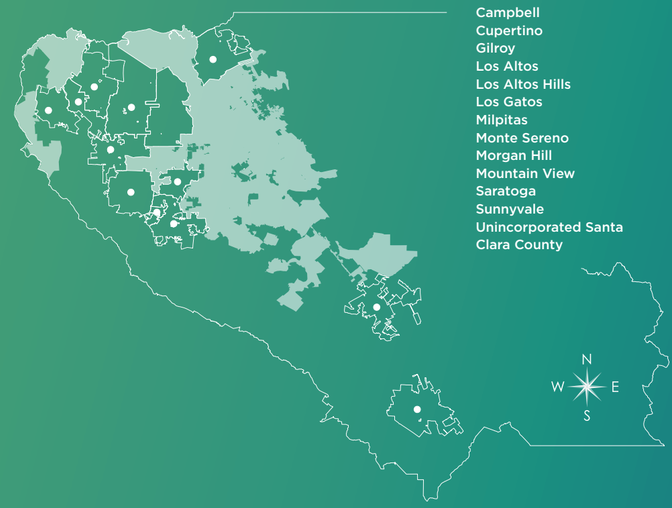
Photo courtesy of SunWorks

SUNWORK

SunWork was formed as a nonprofit organization in 2005 with a mission of reducing the environmental impact of our use of energy by lowering the cost and increasing the reach of clean energy technologies through installations supported by trained volunteers. SunWork started with rooftop solar photovoltaic (PV) projects in 2009, focusing on systems for homes with relatively small energy footprints as well as systems for nonprofits like preschools and safety net service providers. In 2021, SunWork began installing heat pump water heaters, recognizing that as the electricity grid continues to get cleaner and cleaner, changing fuel-burning appliances out for efficient electric alternatives is a key next step in that mission.

"In addition to the direct installation of clean energy technology, SunWork's model, delivering technology training and teaming volunteers up with our small staff of trade professionals for installation workdays, provides education and workforce development as well as environmental action opportunities for members of the community. In the last few years, we have also increased our focus on sharing the learnings that this model allows us to gain in areas like equipment trends, permitting and inspection processes, and incentive programs, with other relevant stakeholders."

sunwork.org



SILICON VALLEY CLEAN ENERGY

YOUR COMMUNITY CHOICE ENERGY PROVIDER

Formed by local communities in 2016 to provide clean electricity and reduce the use of fossil fuels.

Silicon Valley Clean Energy is the public, not-for-profit agency that provides clean electricity for 96% of residents and businesses across 13 Silicon Valley communities.

Our mission is to reduce dependence on fossil fuels by providing carbon free, affordable, and reliable electricity and innovative programs for the SVCE community.

- Ready to take the next step to a healthy home? Silicon Valley Clean Energy has resources for its communities. Get rebates on major electric appliances and installation support via the Go Electric Advisor.

  Call 833.243.4235

  goelectric.svcleanenergy.org

- Fighting climate change by **cutting carbon emissions**.
- **Accelerating adoption** of innovative electric technologies.
- Benefiting our community by **reinvesting locally**.

Silicon Valley Clean Energy does not endorse any one business, brand, or installer.

MODERN WAYS OF COOKING

PRECISION AND PERFORMANCE THAT MAKES INDUCTION A CHEF'S TOP CHOICE

Chef Matt Dailey

Matt has spent his career understanding what makes a kitchen work beautifully. After studying at the Culinary Institute of America, he spent more than a decade in professional kitchens, including serving as Executive Chef for new restaurants opening across the country.

Now based in Napa, Matt has traded the pace of restaurant kitchens for a new kind of culinary adventure. As CEO and co-owner of PLAYTE Kitchen, Matt brings professional techniques to home cooks through hands-on and virtual experiences designed to make cooking feel accessible and inspiring.

At the center of his approach is a passion for the modern electric kitchen. Using induction at the PLAYTE Kitchen studio, Matt demonstrates how precision, responsiveness, and performance can elevate the everyday cooking experience.

Induction offers the responsiveness and precision that chefs need while creating a sleek, safer, healthier, and more comfortable kitchen that is easy to clean.







"Cooking on induction represents the future of the kitchen to me. It gives me the precision and responsiveness I want as a cook while creating an opportunity to rethink how we power our homes and the spaces where we gather. Electrifying our kitchens isn't about sacrificing the joy of cooking—it's about discovering that better technology can help us cook with more control, comfort, and confidence."

—Chef Matt Dailey - Napa, CA

Photos courtesy of PLAYTE Kitchen

ELECTRIC HOME COLLECTION

THE TECHNOLOGIES REDEFINING COMFORT, PERFORMANCE, AND EVERYDAY LIVING

Rebates may be available in your area

HEAT PUMP HEATING & COOLING

A modern home should feel as good as it looks. This home upgrade offers year-round comfort with precise temperature control, peace of mind, and remarkably quiet performance. Your family deserves the best - go electric.

"The new heating and air conditioning system is much more effective at regulating the temperature for the first floor and second floor of the house. It turns out our prior AC system had an undersized air return. The new system is also much quieter than the old system."

—Curt - Gilroy, CA



INDUCTION

Transform everyday cooking into an experience that feels elevated and distinctly modern. Induction combines refined design, exceptional precision, effortless performance, cleaner indoor air, and an easy-to-clean surface.



Photo courtesy of Building Decarbonization Coalition



Sacramento PH: Architecture by PassiveHouseBB, Construction by GoodSpace Builders, Photos by Ed Asmus Photography

“Induction has completely changed the way I think about cooking. The precision, speed, and instant temperature control allow me to focus on the food instead of fighting the heat. My advice is simple: don’t judge induction until you’ve cooked on it. Once you do, you’ll understand why I believe it’s the future of the modern kitchen.”

—Chef John - Irvine, CA

HEAT PUMP WATER HEATER

Hot water is one of the daily luxuries we often take for granted. With precise temperature controls and options for different types of home, they bring efficiency and flexibility to an essential part of the home.

Photo courtesy of LG Electronics USA





EV Chargers

A better driving experience starts at home. Home charging offers convenience while helping Electric Vehicle (EV) owners take advantage of available electricity rates and incentives.

"Here at Park Plaza Apartments, we now have 22 EV chargers. Our tenants are happy, and we couldn't be more happy with the program... We installed EV charging because we wanted to be on the front edge of the whole EV movement. I would recommend that other properties go through this process to install their EV chargers. There would be many infrastructure things that need to get done in order to move forward in the EV future, and the sooner you can get started, the better."

—Property Manager at Park Plaza, Mountain View

LOCAL INNOVATION, LOCAL IMPACT

SVCE INNOVATION ONRAMP PROGRAM

Silicon Valley Clean Energy supports local innovation. To achieve our local, state and national goals, we must leverage existing and new solutions that are reliable, affordable, equitable, and scalable. This is why we view innovation as a key piece of the transition to a clean energy future.

From EV smart charging to data access for contractors to e-bike adoption, Silicon Valley Clean Energy is committed to supporting new solutions for some of the most complicated barriers. We have invested over $1.8 million to 15 local pilot programs designed to do just that. In the latest round of Innovation Funding, Silicon Valley Clean Energy awarded three start-ups working on solutions to reduce complexities of multifamily charging.



Photo courtesy of Quilt