

FLEXLAB®

The world's most advanced decarbonized integrated building and grid technologies testbed



FLEXLAB, Better Together

While we continue to adjust to the challenges of supply chain issues, FLEXLAB is proud to report that we have adapted to become more agile and creative, and have now caught up on our testing backlog due to past shutdown delays. We are now able to accept new testing work, so please contact us if interested.

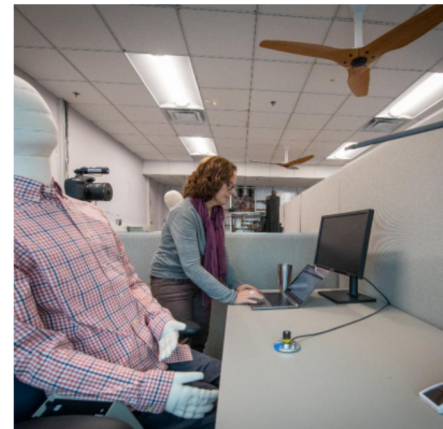
As we celebrated the accomplishments of noteworthy people and organizations for Black History Month in February and celebrate Women History Month, FLEXLAB staff members stepped up to present on inclusion, diversity, equity, and accountability (IDEA) topics to inform our team while fostering a culture of inclusion. Read the articles below and check out our [website](#) to find out what else our researchers have been up to.

[Learn More!](#)

Latest FLEXLAB News & Updates

Integrated Systems Packages (ISPs)

Sponsored by the [Department of Energy \(DOE\) Office of Science](#), the Berkeley Lab [Building Technologies and Urban Systems Division](#) is working on a project to streamline energy retrofits occurring around three key commercial real estate events: tenant fit-out, rooftop unit replacement and whole building renovation. The research team has tested and optimized several different technology configurations and is [developing “packages” of technologies](#) in toolkits that can be adopted and implemented during the intended real estate events. These [ISPs](#) simplify the process for building tenants and owners to implement energy efficiency technologies with confidence.



Demand Response - HVAC Frequency Regulation

As our power grid continues to decarbonize with increased amounts of solar energy, new dynamics in the power supply are emerging, including power quality issues such as frequency control. Building technologies can play a role in supporting the grid during these conditions. In this experiment, researchers created and tested a data-driven optimization-based hierarchical control of an air handler VFD using a simple physical model of the space. It showed it is possible to accurately predict the amount of reserve offered to an electricity market in the day-ahead and manage the temperature set points within a comfortable range, while providing frequency services with an extremely high level of accuracy. Read the FLEXLAB case study to find out more.

[Read more](#)



Effective Kitchen Ventilation for Healthy Zero Net Energy Homes with Natural Gas

In this project, sponsored by the [California Energy Commission \(CEC\)](#), researchers from the [Berkeley Lab Energy Analysis & Environmental Impacts Division](#) conducted a [FLEXLAB](#) experiment to understand the current shortcomings of kitchen ventilation standards for new California homes with natural gas. The experiment provided the technical basis for updating inadequate kitchen ventilation requirements to protect the health of occupants, especially in smaller homes common among low-income renters. Read the full publication to find out more about the FLEXLAB experiment and study.

[Read More](#)



Explore FLEXLAB from the comfort of home

FLEXLAB is the most comprehensive and advanced building and grid technologies test facility in the world, allowing researchers to test in real-world conditions. Now, you can take a peek behind the scenes without leaving your office via a self-guided virtual tour experience.

See what FLEXLAB has to offer: flexlab-tour.lbl.gov



ICYMI

(In case you missed it...)

[FLEXAB Animation](#) [FLEXLAB Self-guided Virtual Tour](#)

[New FLEXLAB Video](#)

[FLEXLAB Case Studies](#)

To learn how **FLEXLAB[®]** can work for you
Contact [Cindy Regnier](#)
Visit flexlab.lbl.gov

Cynthia Regnier, Executive Director
Ravi Prasher, Associate Laboratory Director, Energy Technologies Area
Mary Ann Piette, Division Director, Building Technology & Urban Systems



Energy Technologies Area, Berkeley Lab | LBNL, 1 Cyclotron Road, Berkeley, CA 94720

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