



CCR: THE HUMAN SCALE

DR. MAX WEI

“I appreciate CCR’s emphasis on this research model, to work hand-in-hand with the community to inform and ‘ground truth’ some of our modeling assumptions.”

—Dr. Max Wei

Dr. Max Wei, a research scientist in the Energy Analysis and Environmental Impacts Division at Lawrence Berkeley National Lab, is interested in climate change projects which focus on the intersection of climate resilience and equity. He and his team were awarded CCR funding to develop the CAL-THRIVES toolkit for the Fresno community and other disadvantaged communities in the Central Valley to improve their resilience to extreme heat.

Dr. Max Wei is no stranger to working on climate science projects. He has been at the Energy Analysis and Environmental Impacts Division at Lawrence Berkeley National Lab for twelve years and currently works as a research scientist in the division. Dr. Wei, who was previously an engineer at Intel for twelve years before coming to Lawrence Berkeley National Lab, understands the interdisciplinary nature of climate change and resilience solutions. This inspired him to bring a diverse project group together composed of technical experts, social scientists, and the community-based organization West Fresno Family Resource Center (WFFRC) to create CAL-THRIVES, one of this year’s CCR grant-funded projects.

CAL-THRIVES is a toolkit for the Fresno community and other disadvantaged communities in the Central Valley to improve their resilience to extreme heat. This project concluded that Fresno residents face some of the highest utility bills in California and are often uncomfortable in their homes during the

summer due to high temperatures. To combat extreme heat and improve the comfort of residents in disadvantaged communities, CAL-THRIVES found State policies and programs can address heat resilience through the implementation of local cooling centers and passive cooling measures, such as cool walls and cool roofs, when homes are repainted or when roofs are replaced.

The \$1 Million in CCR funding allowed CAL-THRIVES to conduct extensive outreach within the Fresno community to extend the building modeling tool (CityBES.LBL.gov) to model residential neighborhoods, and to include resilience measures and metrics in the tool. This funding also enabled the team to study and identify policy and program gaps that the State can address to improve heat resilience in disadvantaged communities. CCR's emphasis on working directly with communities, Dr. Wei believes, allows for more broad partnerships which "are needed to meet the challenges of climate change effectively." The community-engaged research model helped the Lawrence Berkeley National Lab team gain insight on how the Fresno community copes with extreme heat, their attitudes regarding community cooling centers, and the issues that they face, such as high utility bills and inadequate cooling in their homes.

"The West Fresno Family Resource Center also conducted almost 100 phone interviews. As a trusted member of the community, I think they were able to collect this data more efficiently than we as an outside lab could have," Dr. Wei said in an email to SGC.

Dr. Wei hopes the CAL-THRIVES toolkit can be shared more broadly to other communities, particularly in the Central Valley, and that the toolkit can help residents suffering from heat waves with more information and tips to cope with the extreme weather. He also hopes CAL-THRIVE and similar projects can support future policy development.

