

# ET Summit 2024

Presented by



# Leveraging EVs to Manage the Electric Grid

## Future Work on Smart Charging Management



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## LBNL's VGI Flexibility Research

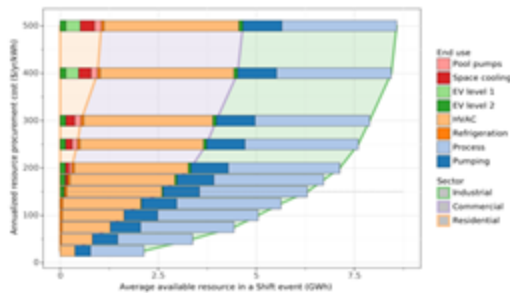
### Developed OpenADR: 2002 to Present

Most Widely Used US and International Standard for Building to Grid Communication



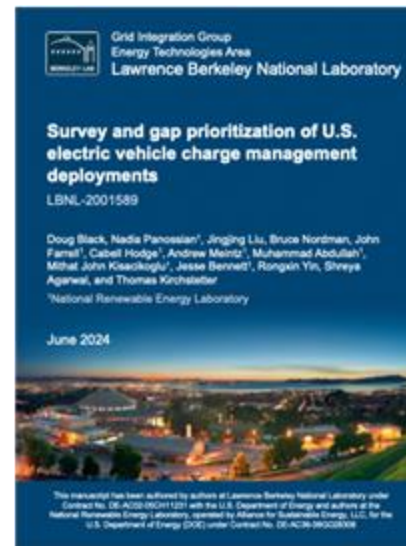
### California DR Potential Study (Phase 1-4)

Leadership in supporting CA state DR policy, legislative goals since 2015



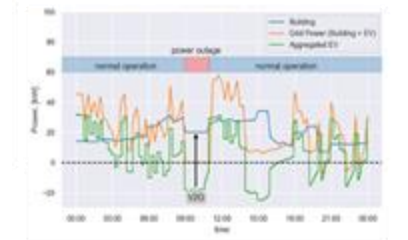
### Smart Charging Management Landscape & Gap Report

Summarize across US to Guide Future Work funded by DOE



### VGI Demos of Grid Services & Back-up Power

e.g., Bi-directional EVs as part of islandable building-scale microgrid; Managed fleet and workplace charging



### CalFlexHub

Creating a pipeline of automated price-responsive building and EV charging technologies



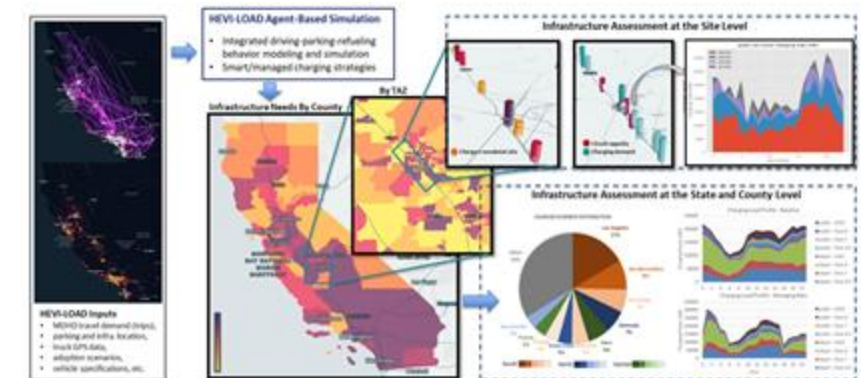
### Connected-communities National Coordinator

Cross-cutting research & technical assistance



### HEVI-LOAD Bottom-up Modeling

Multi-level EV charging infrastructure assessment



# What do we need to learn more? (Priority Gaps)



## Site Level:

Demo technologies for holistic site load management coordinated with SCM



## Distribution System:

How to value capacity management for upgrade deferral; Visibility of local grid real-time condition



## Bulk System:

Granularly manage timer peaks from TOU rates; Improve VPP interoperability

End-to-end certification; SCM evaluation beyond early adopters; equity analysis

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