As the California Energy Commission proudly announced this week, the state is now home to over 200,000 publicly accessible electric vehicle chargers. This milestone is worth celebrating, both in absolute and relative terms: California has far more individual public charging ports than gasoline nozzles, and with around 2 million EVs now on the road, around one public port for every ten vehicles. With many EV drivers regularly charging at one of the estimated 800,000 home chargers installed in the state, this announcement really does signal a robust charging network.

But 200,000 is a far cry from the 1,000,000+ that the Energy Commission estimated we will need to serve 7 million California EVs in 2030. (The estimate was based in part on state vehicle standards that the Trump administration has tried to eliminate - but it demonstrates the scale of the task.) And, of course, the raw number is far less relevant than drivers' experience and expectations of access, availability, convenience, affordability, and reliability. Fuel is only relevant if it's available where and when you need it.

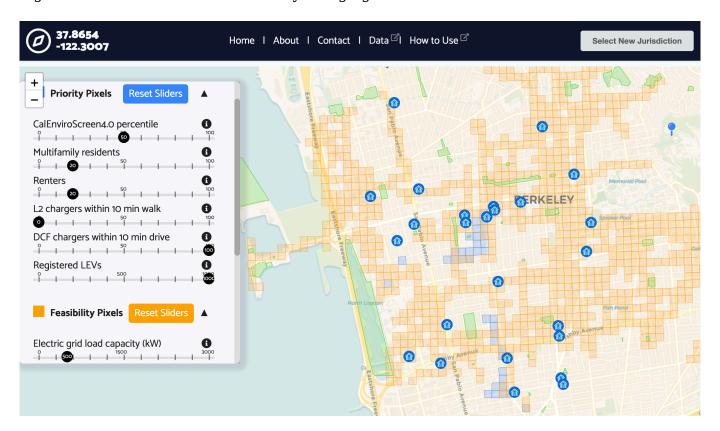
And here, California has a lot of work to do. Anecdotally, we are all aware of the ChargePoint ports in a grocery store parking lot that are always occupied or the bank of Tesla chargers at a distant hotel. While the state is home to a huge network of chargers, they are not currently distributed in a way that will meet all prospective EV drivers' needs.

Unsurprisingly, this is most acute for those least likely to have charging at home. As our team demonstrates in a forthcoming analysis with UC Berkeley's Energy & Resources Group, in terms of competition-adjusted charging access (the number of charging ports relative to local population within a convenient travel distance, which is a more nuanced real-world determinant of charging ability than the raw total number of ports), lower-income and black and brown communities are far less likely to have adequate charging access than their whiter, wealthier counterparts. Residents of these communities are also more likely to be renters and to live in multifamily dwellings and thus need public chargers.

California is going to require a huge increase in public EV chargers-and those chargers will need to be strategically located to serve high-priority communities-if we are going to reach the goal of every driver being able to switch to a clean vehicle in the coming decades, regardless of wealth, demographics, or geography.

And to really serve community needs, siting decisions will need to be made with community priorities front and center. CLEE's EV Equity Roadmap tool provides California local governments and stakeholders a platform to engage in shared decision-making on site selection. The tool combines a mix of "priority" data (income, demographics, pollution exposure, renter/multifamily housing density, current charging access etc.) and "feasibility" data (electric grid capacity, access to still-available federal funding) with potential anchor sites (parks, schools, libraries etc.). It's designed to inform conversations among agencies, developers, and communities to match projects to communities' mobility needs. And it reveals some interesting results.

For example, in Berkeley, only a few residential pockets (in blue) meet a moderately high threshold for environmental exposure risk (50% or above on CalEnviroScreen) and concentration of renters and multifamily residents. However, these areas do not overlap with the most robust distribution lines on the PG&E grid (in orange). But nearby San Pablo Park (at bottom middle) and Strawberry Creek Park (at middle) do - and could serve as high-value destinations for community charging near homes that need it.



By contrast, Long Beach-a larger and more diverse city than Berkeley-is home to wide swaths of neighborhoods meeting those same priority criteria, largely concentrated closest to the port, with an even greater disparity in grid resources. However, a string of affordable housing developments near Long Beach Boulevard between Anaheim and Willow Streets mark an area of dense overlap of priority and feasibility, with the potential to anchor community charging needs.

CLEE and UC Berkeley partners will soon work with San Francisco's environment and transportation departments to conduct similar exercises with local stakeholders, complementing the city's recent <u>first curbside charging deployment and coming citywide feasibility study</u>. These examples show just a handful of criteria in a static presentation. Real community-oriented site selection will require dynamic and iterative application, solicitation of residents' and businesses' preferences, and direct communication with developers and electric utilities. But with hundreds of thousands of chargers to go before California meets its 2030 target, there is plenty of prioritization to be done.