

THE CASE FOR CARB TO INVEST RAPIDLY IN ELECTRIC CARGO BICYCLES (CARB-go-bikes)

And other lightweight electric vehicles

This is Jason Meggs, I worked on climate policy here at CARB for the better half of a decade.

We all know CARB has been focused on reigning in the internal combustion engine for many years, so much so we can seem to have trouble seeing beyond car-as-king to more elegant, expedient, environmental, economic and equitable solutions.

Good news: electric bicycles (eBikes) and other lightweight electric vehicles (LEVs) can substitute very well for larger motor vehicles, performing similarly to cars, trucks and vans for a large share of California trips. And they do so with a tiny fraction of the energy, allowing rapid increase with the existing electric grid, unlike electric cars.

Of course we all know that even with electric assist, most cyclists are not going to go out for a 60-mile errand, but they will readily go for a 5 or even 10-mile errand, many longer, particularly in an urban environment where a bicycle is often faster than a car for both travel time and finding parking.

Even better, eBikes increase equity across ages, abilities and income levels. They provide accessible, affordable transport to millions of people who face challenges today because of lack of public transport, severely exacerbated now by the pandemic.

Ebikes provide all this at a small fraction of the cost and a tiny fraction of the overall environmental and public health impact as ZEV cars, vans and trucks. This is extremely important as we face the vexing problem that CARB admittedly cannot meet its ZEV targets with larger vehicles alone, even before we face the reality that petroleum and rare earth elements essential for electric vehicle production will be in dramatically short supply.

We've had a duty to invest in a large increase in bicycling for many years. AB 32 mandated we "adopt regulations to achieve the **maximum technologically feasible and cost-effective greenhouse gas emissions reductions**", extended by SB 32 to achieve **at least** 40 percent more, and we are required to shoot far beyond that minimum greenhouse gas reduction requirement.

Bicycles are not only **technologically feasible**, they offer **maximum greenhouse gas reductions**.¹ There is no more energy-efficient land vehicle. And to say they are cost-effective is an incredible understatement. For some of the rebates we've offered to lower-income families in disadvantaged communities to purchase a single electric car, we could outfit the entire family with freedom, ongoing support, debt-free, making their communities that much healthier and more livable in the process.

Picture a California where bicycling is a happy norm far and wide.

Not only are bicycles inexpensive to provide, but their cost benefits to the economy, including public health benefits and their boost to local retail, are remarkable and very well studied. What better way to being than immediately with this year's Program Priorities?

¹ See my discussion document (also attached to item) prepared at CARB for the Low-Carbon Fuel Standard, which found conservatively that electric bicycles are approximately 25-700X more carbon-efficient to perform the same job as cars, vans and trucks. <https://meggsreport.files.wordpress.com/2021/01/lcfs-eer-for-cargo-bicycles-june2018.pdf>