

ELECTRIC BICYCLES

Electric bicycles are equipped with small battery-powered motors to assist riders so that they can travel further and faster and get up hills with less effort. These batteries can be charged at any electrical outlet, and when the electricity used to charge them is produced by clean or renewable sources, e-bikes are emissions-free. Compared to electric vehicles, e-bikes are more affordable and use less electricity. They also reduce traffic burdens in crowded cities. However, they are limited to relatively short distances. A 2019 study found that 72% non-recreational miles traveled by e-bike globally would have been traveled by car if an e-bike was not available,¹ showing that e-bikes have a significant potential to displace car travel for short-distance mobility. Federal legislation called the E-BIKE Act has been proposed to enable more Americans to own and utilize e-bikes to get around.

- Fishery friendliness: Bicycling is a fishery friendly technology with negligible potential impacts to fishery ecosystems and resources. Lithium-ion batteries that are used in e-bikes may raise concerns related to mining and disposal of mineral components, and these should be addressed as part of a fishery friendly approach to climate action.
- Co-benefits: Expansion and improvement of bicycle infrastructure has many co-benefits, including cost savings (individual and public), health benefits associated with exercise and fresh air, improvement to urban air quality, and public safety.
- Environmental externalities: Bicycling can improve air quality by taking cars off the road.
- Policy catalysts: Bicycle infrastructure can be promoted through grants to municipalities and workplaces, tax incentives to riders and employers, and reduction of incentives to drive.
- More information:
 - [Drawdown: Electric bicycles](#)
 - [Kinchen, Kimberly, People for Bikes \(February 15, 2021\). "Electric bicycles can play a big role in combating climate change."](#)
 - [People for Bikes \(February 9, 2021\). "New E-BIKE Act would offer tax credits for electric bicycle purchases."](#)
 - [Transportation Research and Education Center \(January 19, 2022\). "E-bike incentive programs in North America: New online tracker."](#)
 - [McQueen et al. 2019. *The e-bike potential: Estimating the effect of e-bikes on person miles travelled and greenhouse gas emissions*. Transportation Research and Education Center.](#)

Continue reading at <https://fisheryfriendlyclimateaction.org/solutions>

¹ McQueen, Michael, MacArthur, John, and Cherry, Christopher. 2019. *The e-bike potential: Estimating the effect of e-bikes on person miles travelled and greenhouse gas emissions*. Transportation Research and Education Center. https://wsd-pfb-sparkinfluence.s3.amazonaws.com/uploads/2019/05/E-bike-Potential-Paper-05_15_19-Final.pdf