

## E90 Proposal

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Project: Hybrid Electric Bike

Advisor: Erik Cheever

### Description:

Our group would like to make a hybrid electric bike for our senior design project. The bike will be a human-powered vehicle with battery powered motor. It will be designed in a way that the battery gets charged while pedaling or going downhill. The intended speed is 20~30 miles with the motor turned on.

### Purpose:

Electric bikes have several advantages and environmental significance compare to gasoline based vehicles and normal bikes. Since the battery is rechargeable and the bike is gasoline free, it saves lots of money on energy sources. And an electric bike is more convenient than cars when it comes to mid distance traveling. Due to its electrical nature, it is both noise and pollution free. That obviously makes it a favorable transportation vehicle for environmental purposes. Also, the electric bike can generate economical profit. For countries where bicycles are main transportations, an electric bike can save great time and effort between communes.

