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## BIKE RACK COLLECTS ENERGY GENERATED BY CYCLISTS

 SUSTAINABILITY

### A new sustainable design for a bike rack could collect the kinetic energy generated by cyclists

**Spotted:** Around 68 percent of people in Amsterdam commute to work or school by bicycle, accounting for around 1.25 million miles of cycling a day. All of these cyclists generate an estimated 19.5 million watt-hours of energy each day. This would be enough energy to power thousands of homes – if it could be captured. Now, two Dutch designers think they may have found a way.

Designers [Guillaume Roukhomovsky](#) and Blaž Verhnjak have created S-Park, a bike rack system that can use kinetic energy from cycling to charge batteries. The system was proposed as part of Amsterdam's [Clean Energy Challenge](#). As the rider bikes around the city, their front wheel produces kinetic energy, which is stored in batteries on the bicycle. When done riding, cyclists park the bike in a communal bike rack that's connected to the electricity grid. The energy that the batteries stored during the ride is then discharged into the electrical grid. The system includes a front wheel that can be popped into any bike frame. The designers estimate that each bike rack could generate about one kilowatt-hour of energy per day.

While Roukhomovsky and Verhnjak don't yet have a prototype, interested companies have already reached out to help them bring their idea to life. Amsterdam is planning to invest about €90 million in biking infrastructure by 2020, and the team hopes S-Park can be part of it. If so, it will join other innovative clean



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## Takeaway:

If S-Park proves effective, it could also be used with rental bikes in other cities, creating a way for bike rental companies to earn income from both the rentals and from generating clean energy. What other ways are there to generate clean energy from everyday actions?

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