Forget Electric Cars, Electric Roads are the Future

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If electric cars never really take off in popularity, how about the flip side? Electrified roads.

Previous ideas with electrified roads required a coil to be attached to the car, which is unreasonable if the car is moving. Now, researchers at Toyota Central R&D Labs and Toyohashi University of Technology are looking into a method where the energy would enter the car from the road through the tires, which are always in contact with the ground. New Scientist has more on the research:

Such technology would allow electric cars to forgo their heavy batteries, which not only add to a vehicle's weight, increasing the energy needed to move it, but also force it to sit idle while recharging.

To test how much energy would be lost as electricity travelled through the tyres’ rubber, [Masahiro] Hanazawa and [Takashi] Ohira set up a lab experiment in which they put metal plates on the floor and inside a tyre. “Less than 20 percent of the transmitted power is dissipated in the circuit,” says Ohira.

With enough power the system could run typical passenger cars, says Ohira, and the team are now developing a small-scale prototype to prove it. He admits, however, that the system's energy loss is “much higher than regular batteries.”

Electrified roads pose an obvious problem for pedestrians — there’s no rocking on this electric avenue. New Scientist reports John Boys, an electrical engineer at the University of Auckland, New Zealand, as saying that as much as 500,000 volts would be needed to power cars in the way Ohira and Hanazawa would like.

"You wouldn't want to step on that,” he says.

New Scientist also notes infrastructure investment and radio-frequency interference as limitations to this idea.

This post originally appeared at The Blaze.

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