

Electricity generated from gravity

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Mexican entrepreneurs developed a system capable of using the vehicular flow to generate electric energy. This development has the potentiality to produce sufficient electricity to power up a household through a device that "catches" the force of the moving cars.

"This is a technology that provides sustainable [energy](#) and could be implemented at low prices, since it's a complement of already existing infrastructure: the concrete of streets and avenues", Héctor Ricardo

Macías Hernández, developer of the system, said. He added that at a global level there are no records of similar projects, with exception of an English patent, but with the difference that in the European country piezoelectric floors are used, which are too expensive for developing countries.

The technology consists in a system that integrates a ramp-step (elaborated with [polymeric material](#) similar to the ones used in the manufacture of tires) that elevates to five centimeters above the level of the street. When receiving the impact of the vehicle, this ramp exerts pressure over a bellows.

This artifact contains air that is expelled at a certain pressure through a hose; later, this element travels to a tank where it is compressed and relaunched to an electricity generating turbine. Macías Hernández also said that the accumulation of [electric energy](#) is proportional to the flow of cars over a determinate spot; however, in places with low vehicular flow, several ramp-steps could be placed to multiply the impact of every individual vehicle.

The developer added that the [technology](#) could also be implemented in places with high pedestrian flow. This way, the steps of the people would generate electricity according to the laws of gravitational energy, and this principle could be implemented in places like the subway.

According to Macías Hernández, this development is translated in a source of [sustainable energy](#) that implies a low execution cost. The entrepreneur also mentioned that the support of the Mexican Institute of Industrial Property (IMPI) was essential to achieve the technological development given that the institution elaborated a previous study regarding the viability of the project and gave advice to structure the necessary patents of the invention.

Provided by Investigación y Desarrollo

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